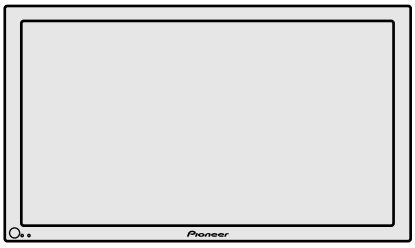
Pioneer sound.vision.soul

Service Manual



PDP-434CMX

ORDER NO.
ARP3198

PLASMA DISPLAY

PDP-434CMX
PDP-43MXE1
PDP-43MXE1-S

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-434CMX	LUC	AC100 - 120V	
PDP-43MXE1	LDFK	AC100 - 240V	
PDP-43MXE1-S	LDFK	AC100 - 240V	

Refer to the following service manual for video card.

Model No.	Order No.	Remarks
PDA-5003, PDA-5004	ARP3191	EXPLODED VIEWS, BLOCK DIAGRAM etc.

For details, refer to "Important symbols for good services".

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ⓒ**PIONEER CORPORATION 2004**

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SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

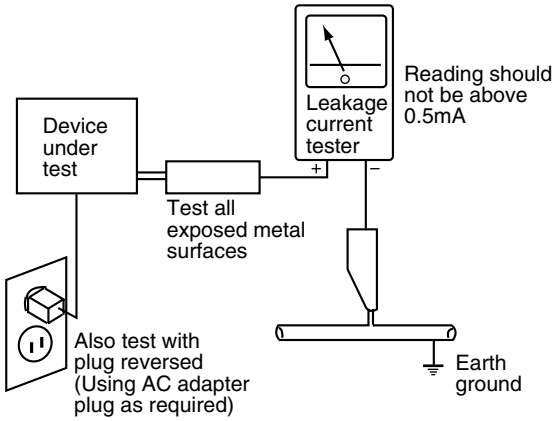
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer (In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. POWER SUPPLY Unit..... (215V)
2. 43 X DRIVE Assy ..... (–225V to 215V)
3. 43 Y DRIVE Assy ..... (345V)
4. 43 SCAN A Assy ..... (345V)
5. 43 SCAN B Assy ..... (345V)
6. X CONNECTOR AAssy ..... (–225V to 215V)
7. X CONNECTOR B Assy ..... (–225V to 215V)

: Part is Charged Section.

: Part is the High Voltage Generating Points other than the Charged Section.

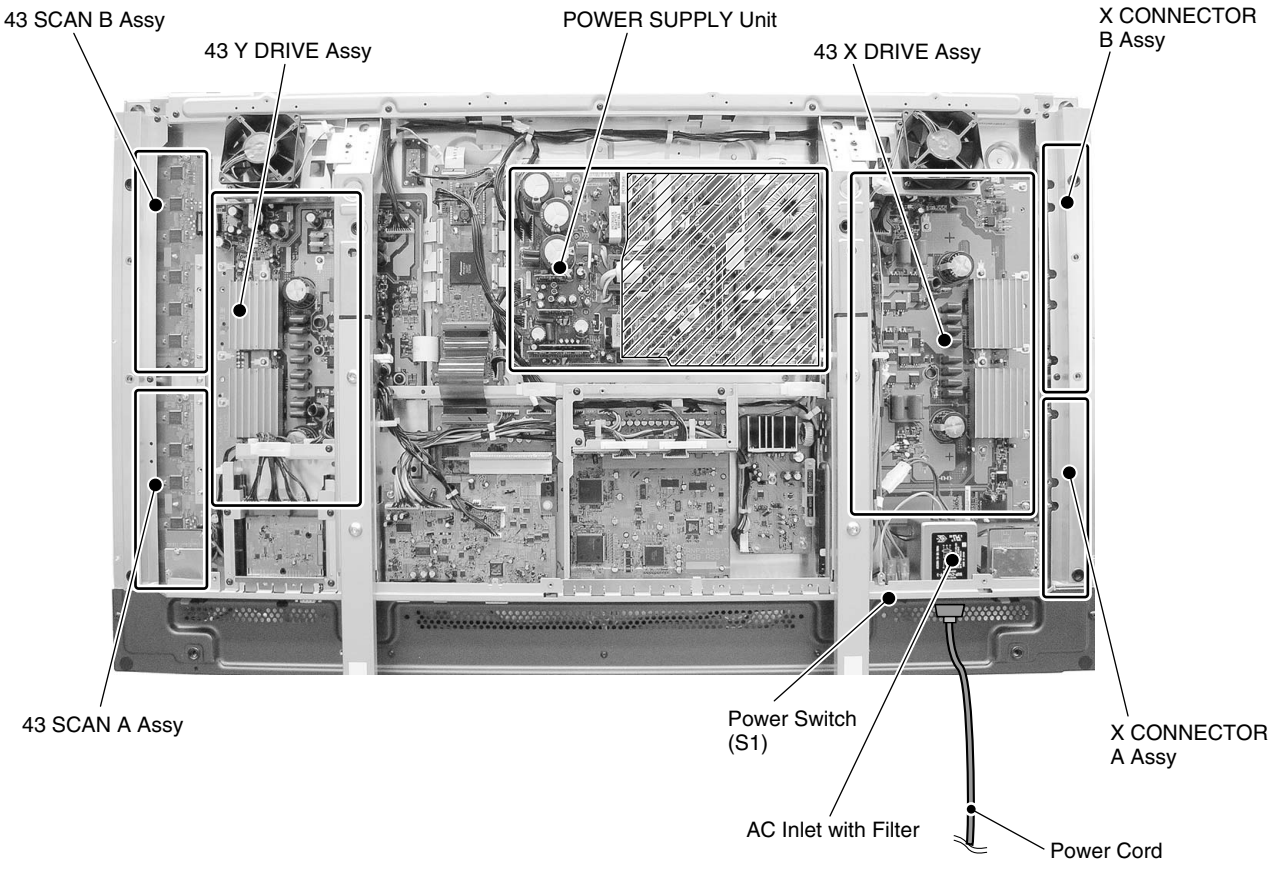


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

■ PLASMA DISPLAY
(PDP-434CMX, PDP-43MXE1, PDP-43MXE1-S)

General

Light emission panel ..... "43-inch" AC Plasma Panel
95.2 (W) x 53.6 (H) x 109.3 (diagonal) cm
Number of pixels ..... 1024 x 768
Power supply .... AC 100 - 120 V, 50/60 Hz (PDP-434CMX)
Power supply .... AC 100 - 240 V, 50/60 Hz (PDP-43MXE1)
(PDP-43MXE1-S)
Rated current .....2.98 A - 24.8 A (PDP-434CMX)
Rated current .....2.98 A - 1.24 A (PDP-43MXE1)
(PDP-43MXE1-S)
Standby power consumption .....0.8 W (PDP-434CMX)
Standby power consumption .....1 W (PDP-43MXE1)
(PDP-43MXE1-S)
External dimension .....1070 (W) x 630 (H) x 98 (D) mm
42-1/8 (W) x 24-13/16 (H) x 3-7/8 (D)
(D: Not including handles) in.
(including display stand)
.....1070 (W) x 653 (H) x 300 (D) mm
42-1/8 (W) x 25-23/32 (H) x 11-13/16 (D) in.
Weight 32.5kg
(including display stand) ..... 33.1 kg (73 lbs.)
Operating temperature range..... 0 to 40 °C
Operating Humidity ..... 20 to 80 %
Operating atmospheric pressure range .... 760 to 1100 hPa

Input/output

Video

INPUT 1

Input — Mini D-sub 15 pin (socket connector)
RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/VS, VD ... TTL level
/positive and negative polarity
/2.2 kΩ
G ON SYNC
... 1 Vp-p/75 Ω/negative sync.
*Compatible with Microsoft's Plug & Play
(VESA DDC1/2B)

Output — Mini D-sub 15 pin (socket connector)
75 Ω/with buffer

INPUT 2

Input — DVI-D 24-pin connector
Digital RGB signal (DVI compliant
TMDS signal)
*Compatible with Microsoft "Plug & Play"
(VESA DDC 2B)

Audio

Input — AUDIO INPUT (for INPUT 1)
Stereo mini jack
L/R ... 500mVrms/more than 10 kΩ
AUDIO INPUT (for INPUT 2)
Stereo mini jack
L/R ... 500mVrms/more than 10 kΩ

Output — AUDIO OUTPUT
Stereo mini jack
L/R ... 500mVrms (max)/less than 5 kΩ
SPEAKER
L/R ... 8 – 16 Ω/7W +7W (at 8 Ω)

Control

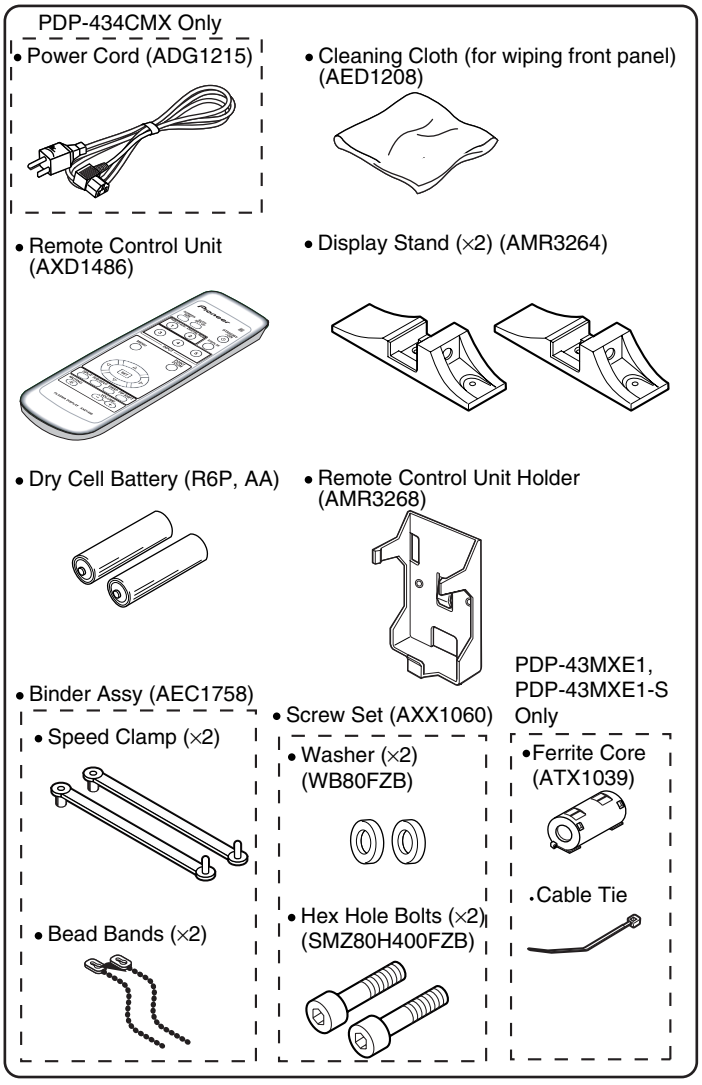
RS-232C .....D-sub 9 pin (pin connector)
COMBINATION IN/OUT..... Mini DIN 6 pin (x2)

Accessories

Power cord ..... 1 (PDP-434CMX Only)
Remote control unit 1
Remote control unit holder 1
AA (R6) batteries 2
Cleaning cloth (for screen) 1
Speed clamps 2
Bead bands 2
Warranty ..... 1 (PDP-434CMX Only)
Operating Instructions 1
Display stands 2
Washers 2
Hex hole bolts (M8X40) 2
Ferrite core .....1 (PDP-43MXE1, PDP-43MXE1-S Only)
Cable tie .....1 (PDP-43MXE1, PDP-43MXE1-S Only)

Due to improvements, specifications and design are subject to change without notice.

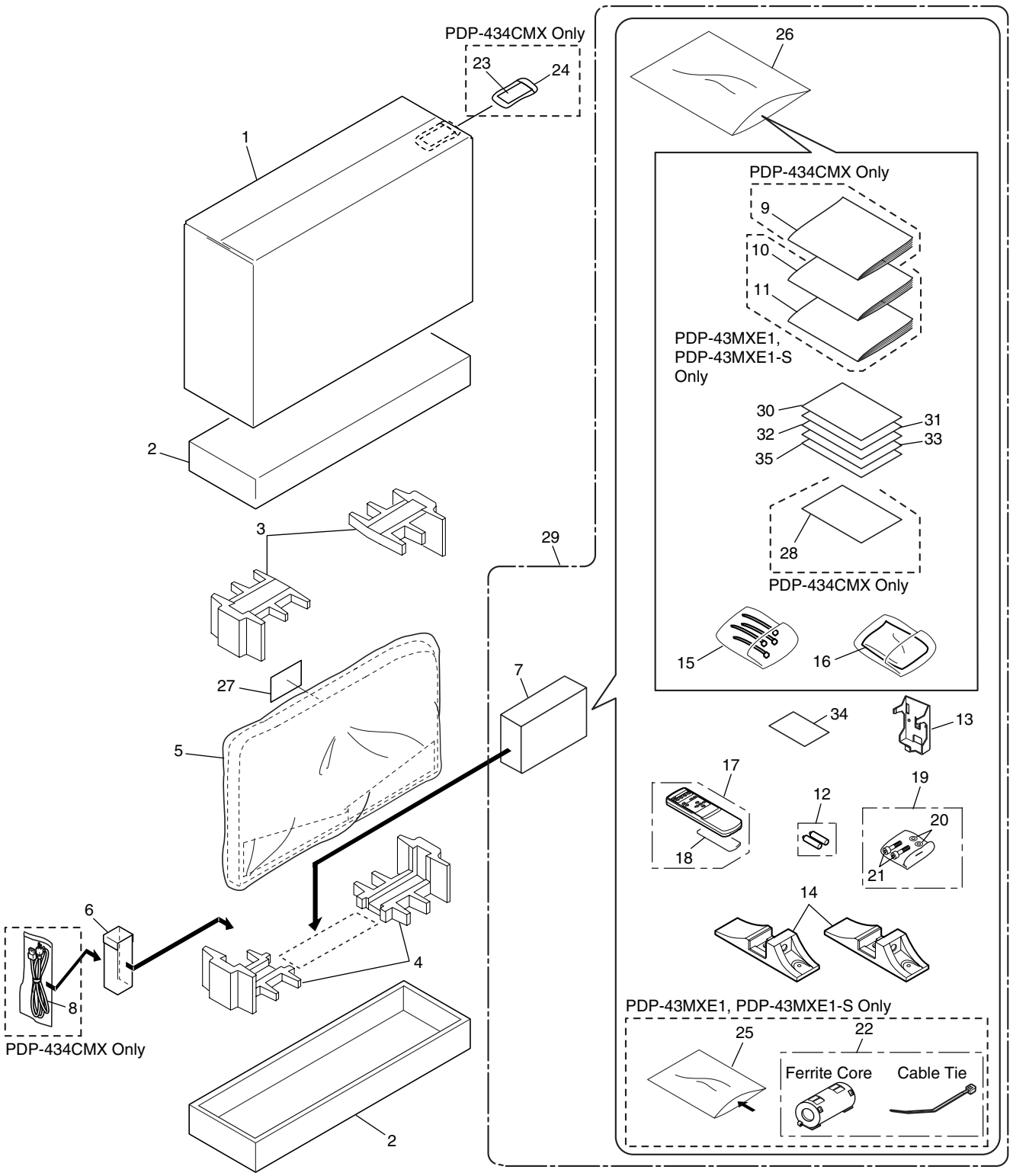
● Accessories



2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



PACKING Parts List

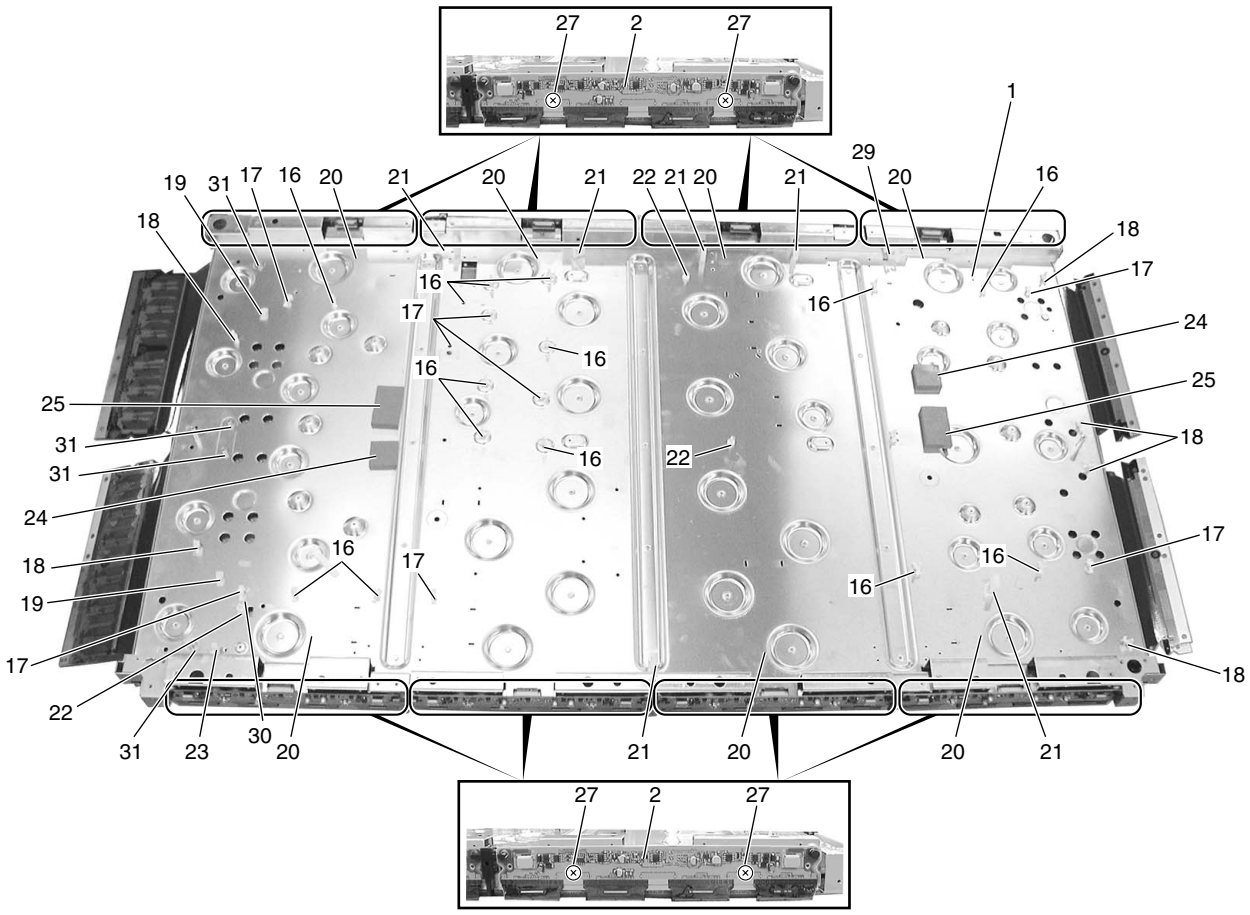
Mark	No.	Description	Part No.
	1	Upper Carton	See Contrast table (2)
	2	Carton (43)	AHD3100
	3	Pad (43U)	AHA2282
	4	Pad (43L)	AHA2283
	5	Mirror Mat	AHG1284
	6	Cord Case	AHC1037
	7	Accessory Case	AHC1040
⚠	8	Power Cord	See Contrast table (2)
	9	Operating Instructions (English / French / Japanese)	See Contrast table (2)
	10	Operating Instructions (Italian / Spanish / Dutch / Chinese)	See Contrast table (2)
	11	Operating Instructions (English / French / German)	See Contrast table (2)
NSP	12	Dry Cell Battery (R6P, AA)	VEM1031
	13	Remote Control Unit Holder	AMR3268
	14	Display Stand	AMR3264
	15	Binder Assy (Speed Clamp x2, Bead Band x2)	AEC1758
	16	Cleaning Cloth (for screen)	AED1208
	17	Remote Control Unit	AXD1486
	18	Battery Cover	AZN2462
	19	Screw Set	AXX1060
	20	Washer	WB80FZB
	21	Hex Hole Bolt	SMZ80H400FZB
	22	Ferrite Core	See Contrast table (2)
NSP	23	Warranty Card	See Contrast table (2)
NSP	24	Vinyl Bag	See Contrast table (2)
	25	Polyethylene Bag	See Contrast table (2)
	26	Polyethylene Bag	AHG1330
	27	Caution Sheet	ARM1201
	28	Image Stick Caution	See Contrast table (2)
	29	Accessory C.Assy 4CMX	See Contrast table (2)
	30	Plasma Caution Sheet	ARM1147
	31	Plasma Caution Sheet	ARM1149
	32	Caution Sheet	ARM1176
	33	Caution Sheet	ARM1200
NSP	34	Warranty Card	See Contrast table (2)
	35	Image Caution Sheet	ARM1220

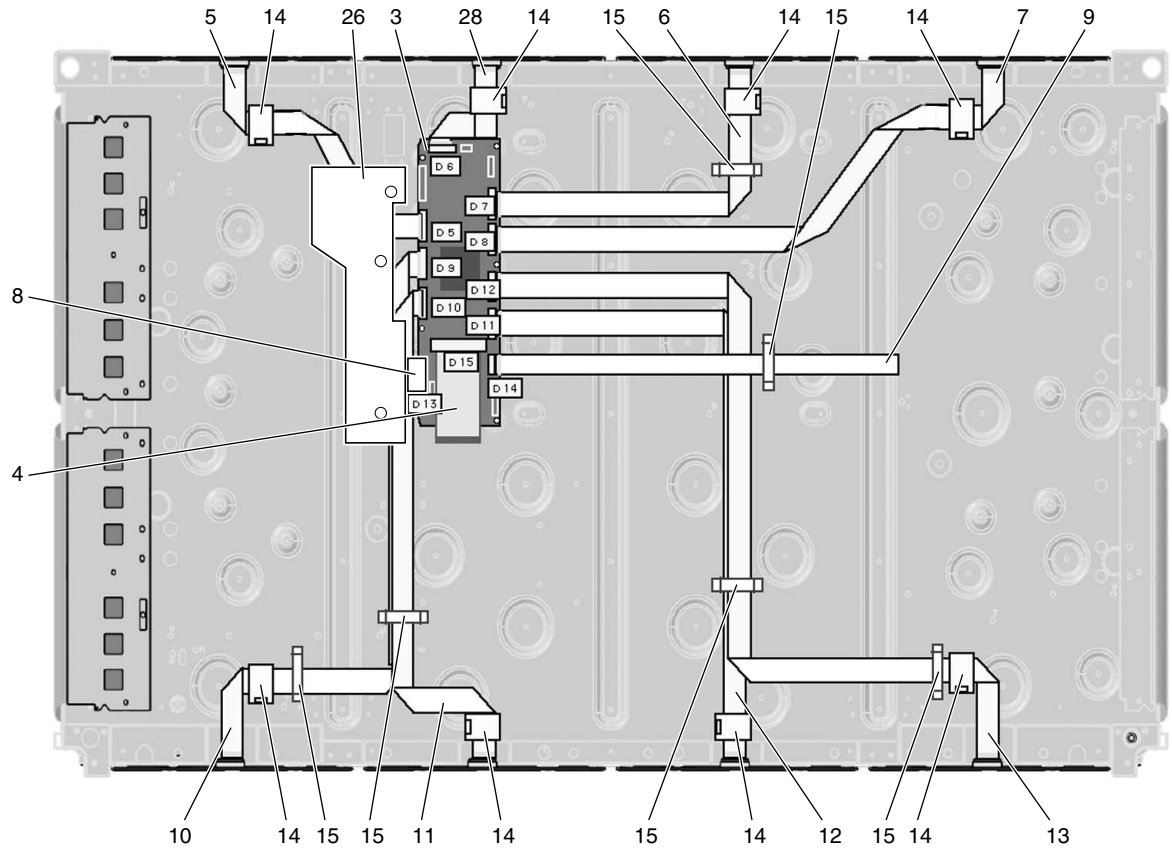
(2) CONTRAST TABLE

PDP-434CMX/LUC, PDP-43MXE1/LDFK and PDP-43MXE1-S/LDFK are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-434CMX/ LUC	PDP-43MXE1/ LDFK	PDP-43MXE1-S/ LDFK
	1	Upper Carton (434CMX)	AHD3232	Not used	Not used
	1	Upper Carton (43MXE1)	Not used	AHD3233	Not used
	1	Upper Carton (43MXE1-S)	Not used	Not used	AHD3234
⚠	8	AC Power Cord	ADG1215	Not used	Not used
	9	Operating Instructions (English/French/Japanese)	ARD1055	Not used	Not used
	10	Operating Instructions (Italian/Spanish/Dutch/Chinese)	Not used	ARC1527	ARC1527
	11	Operating Instructions (English/French/German)	Not used	ARE1377	ARE1377
	22	Ferrite Core	Not used	ATX1039	ATX1039
NSP	23	Warranty Card	ARY1093	Not used	Not used
NSP	24	Vinyl Bag	AHG-195	Not used	Not used
NSP	25	Polyethylene Bag	Not used	AHG1337	AHG1337
	28	Image Stick Caution	ARM1240	Not used	Not used
NSP	29	Accessory C.Assy 4CMX	AXX1065	AXX1066	AXX1066
NSP	34	Warranty Card	ARY1146	Not used	Not used

2.2 CHASSIS SECTION (1)

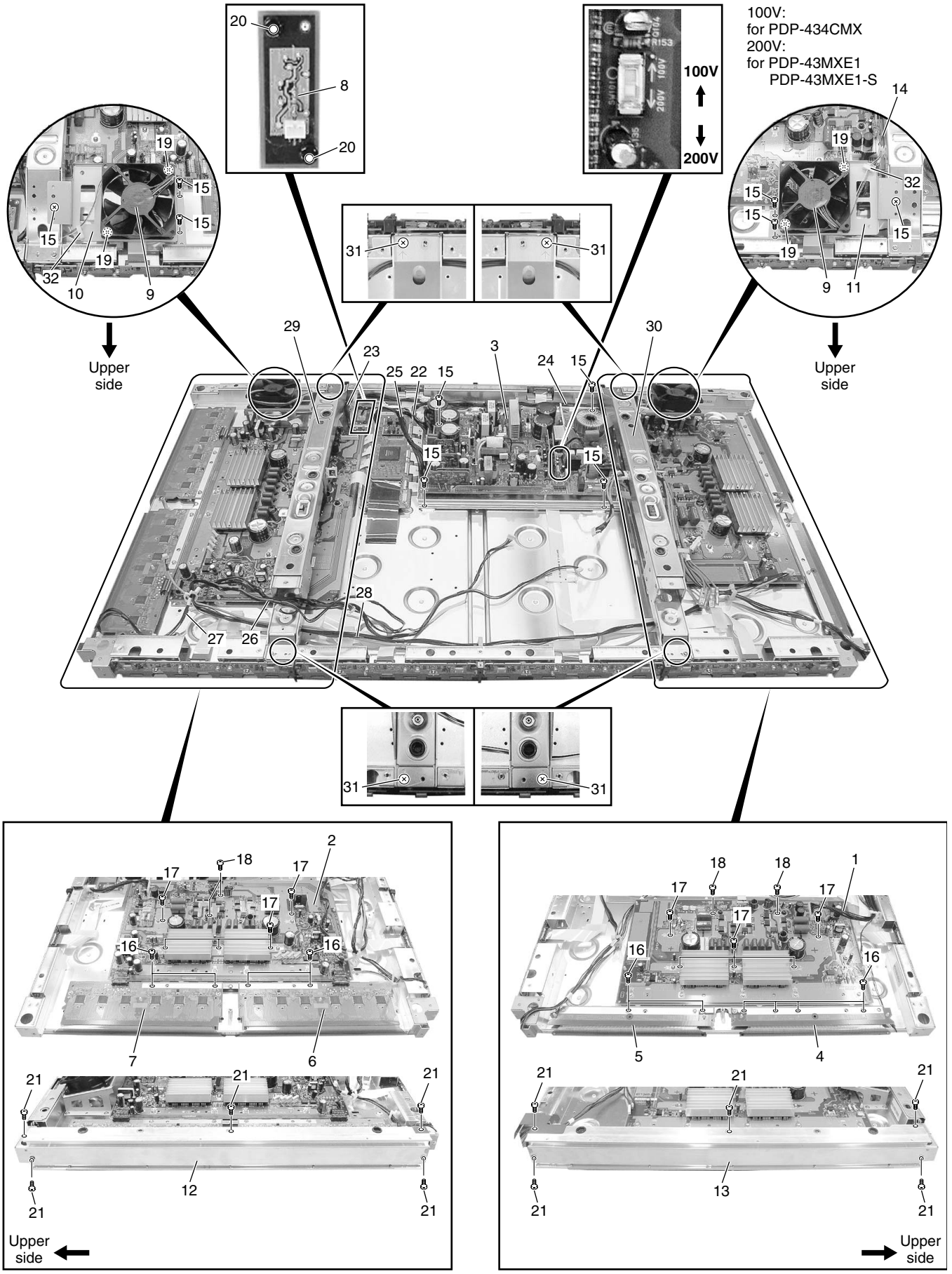




CHASSIS SECTION (1) parts List

Mark	No.	Description	Part No.
NSP	1	P. Chassis (43) Assy	AWU1098
NSP	2	43 ADDRESS Assy	AWZ6793
	3	DIGITAL VIDEO Assy	AWV2100
	4	FPC (114P)	ADY1081
	5	Flexible Cable (J201)	ADD1257
	6	Flexible Cable (J203)	ADD1259
	7	Flexible Cable (J204)	ADD1260
	8	Flexible Cable (J209)	ADD1223
	9	Flexible Cable (J210)	ADD1224
	10	Flexible Cable (J205)	ADD1261
	11	Flexible Cable (J206)	ADD1262
	12	Flexible Cable (J207)	ADD1263
	13	Flexible Cable (J208)	ADD1264
	14	Ferrite Core	ATX1048
	15	Flat Clamp	AEC1879
	16	PCB Spacer	AEC1941
	17	PCB Support	AEC1938
	18	PCB Spacer	AEC1944
	19	PCB Support	AEC1958
	20	Ferrite Clamp	AEC1986
	21	Wire Saddle	AEC1745
	22	PCB Spacer	AEC1947
	23	Locking Wire Saddle	AEC1948
	24	Drive Silicone Sheet C	AEH1066
	25	Drive Silicone Sheet B	AEH1065
	26	Y Drive Protection Sheet	AMR3346
	27	Screw	VBB30P080FNI
	28	Flexible Cable (J202)	ADD1258
	29	Locking Wire Saddle	AEC1992
	30	HL18	AEC1980
	31	Edge Card Spacer	AEC1998

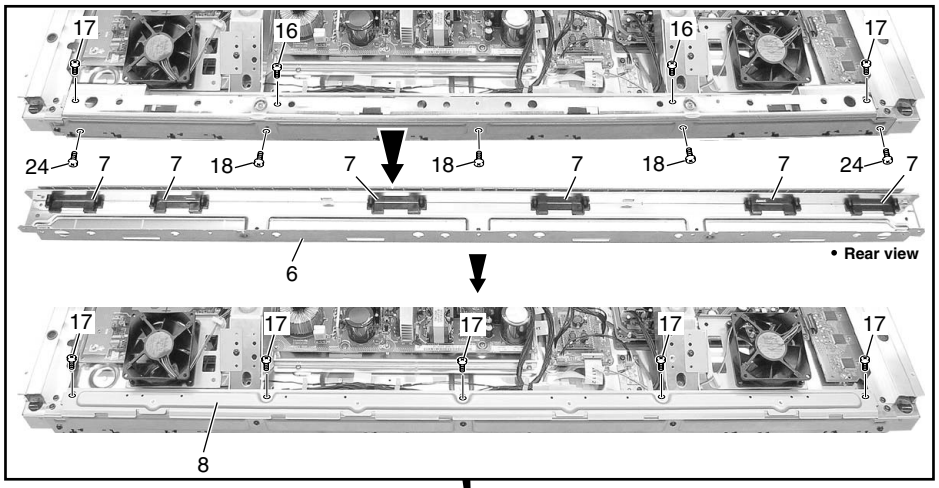
2.3 CHASSIS SECTION (2)



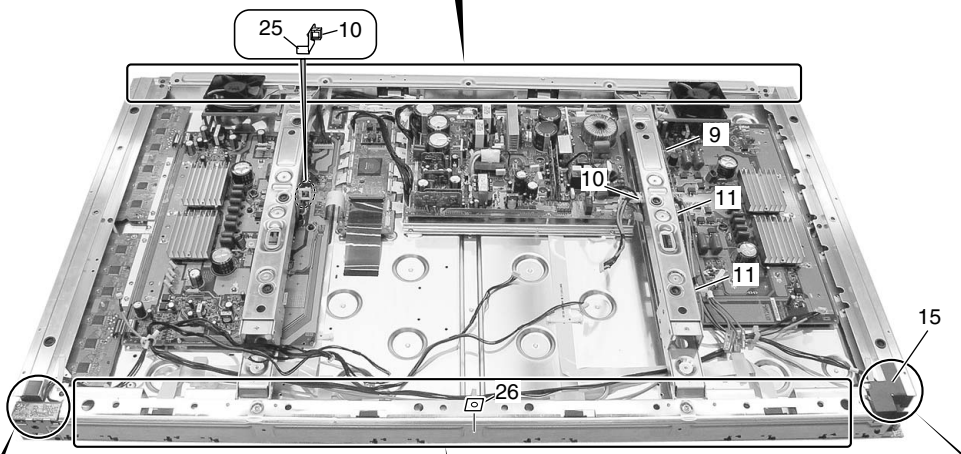
CHASSIS SECTION (2) parts List

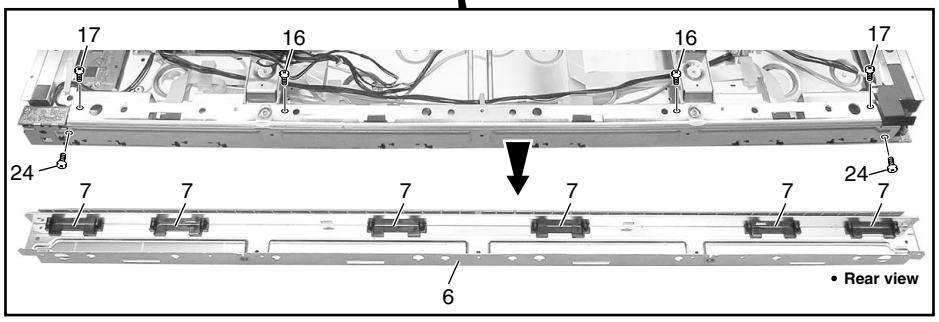
Mark	No.	Description	Part No.
	1	43 X DRIVE Assy	AWZ6840
	2	43 Y DRIVE Assy	AWV2022
⚠	3	POWER SUPPLY Unit	AXY1083
NSP	4	X CONNECTOR B Assy	AWZ6799
NSP	5	X CONNECTOR A Assy	AWZ6798
NSP	6	43 SCAN A Assy	AWZ6796
NSP	7	43 SCAN B Assy	AWZ6797
	8	PANEL SENSOR Assy	AWZ6795
⚠	9	Fan Motor (80 x 25)	AXM1044
	10	Fan Angle L (43M)	ANG2655
	11	Fan Angle R (43M)	ANG2656
	12	F Chassis VL (43M)	ANA1755
	13	F Chassis VR (43M)	ANA1756
	14	Housing Wire for Fan (J117)	ADX2904
	15	Screw	ABZ30P060FMC
	16	Screw	PMB30P060FNI
	17	Screw	VBB30P080FNI
	18	Screw	PMB40P080FZK
	19	Screw	PPZ50P100FZK
	20	Nyron Rivet	AEC1671
	21	Screw	AMZ30P060FZK
	22	3P Housing Wire (J109)	ADX2847
	23	11P Housing Wire (J102)	ADX2840
	24	12P Housing Wire (J103)	ADX2841
	25	Wire A (J101)	ADX2839
	26	Wire G (J118)	ADX2905
	27	Wire F (J119)	ADX2906
	28	9P Housing Wire (J115)	ADX2902
	29	Sub Frame L Assy (43M)	ANG2623
	30	Sub Frame R Assy (43M)	ANG2625
	31	Screw	AMZ30P080FMC
	32	Locking Wire Saddle	AEC1948

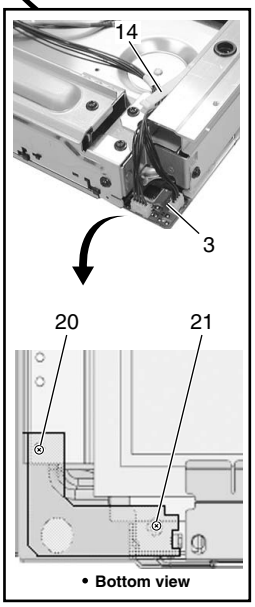
2.4 FRAME SECTION

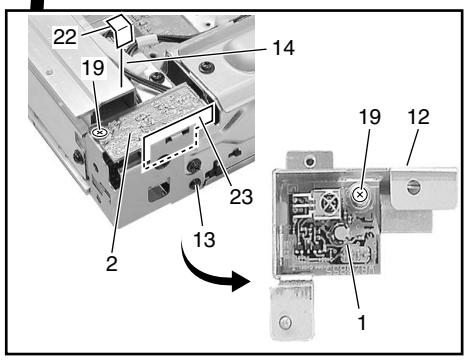


Upper side





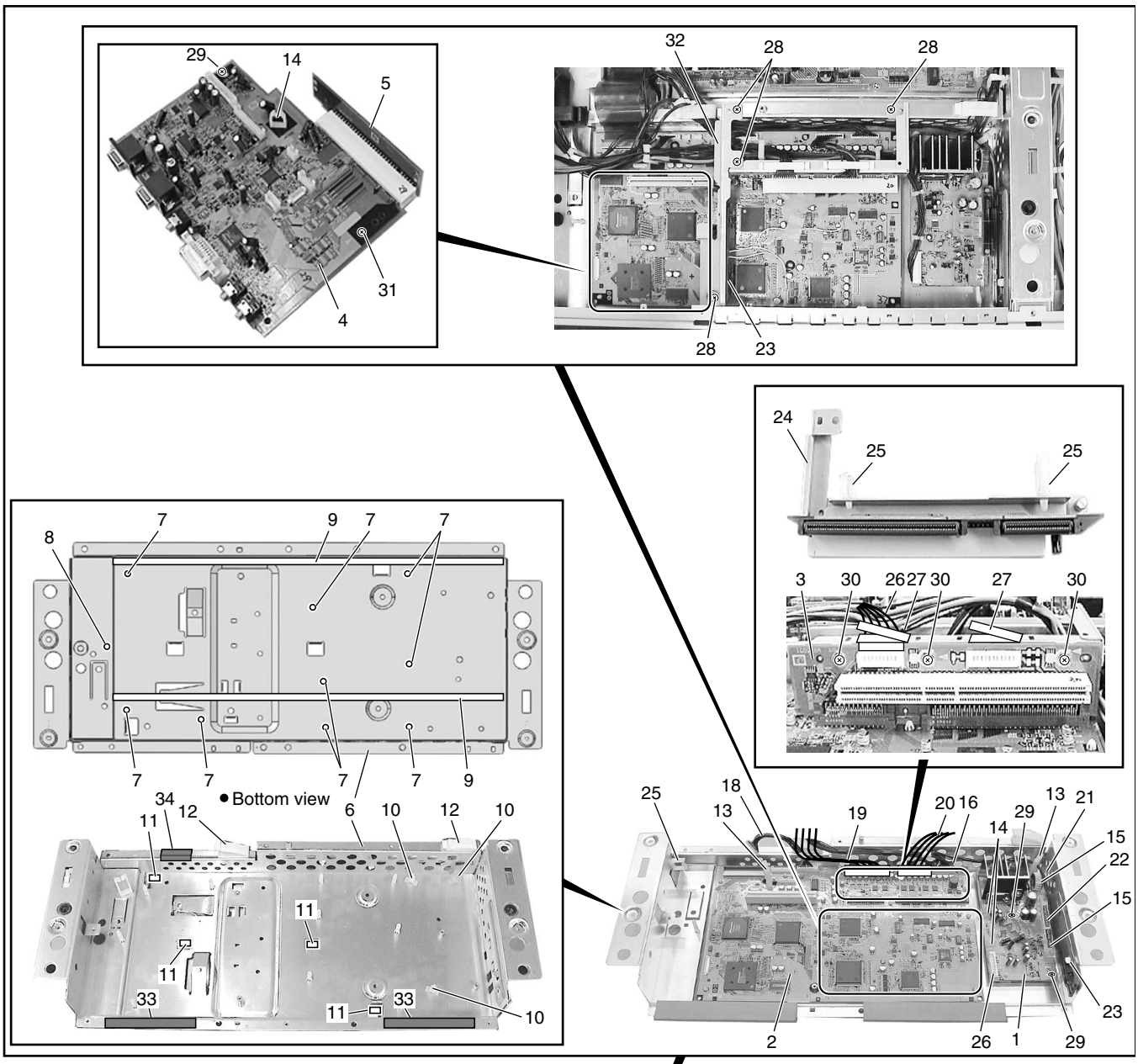




FRAME SECTION parts List

Mark	No.	Description	Part No.
	1	IR RECEIVE Assy	AWZ6855
	2	KEY CONTROL Assy	AWZ6853
	3	LED OPT Assy	AWZ6957
	4	•••••	
	5	•••••	
NSP	6	Front Chassis H (43)	ANA1714
	7	Front Spacer (CMX)	AMR3384
	8	Rear Frame (43M)	ANG2613
	9	Locking Wire Saddle	AEC1948
	10	Locking Wire Saddle	AEC1992
	11	Wire Saddle	AEC1745
NSP	12	IR Holder	ANG2551
	13	Nyron Rivet	AEC1671
	14	Flat Clamp	AEC1879
	15	Enclosure Sheet 1	AMR3405
	16	Screw	AMZ30P080FMC
	17	Screw	AMZ30P060FZK
	18	Screw	APZ30P080FZK
	19	Screw	ABZ30P060FMC
	20	Nyron Rivet	AEC1997
	21	Screw	BBZ30P050FMC
	22	Enclosure Sheet 2 (V)	AMR3411
	23	Enclosure Sheet 3	AMR3407
	24	Screw	PMB30P060FNI
	25	Cable Cover	AMR3431
	26	Front Case Spacer	AMR3430

2.5 MULTI BASE SECTION



MULTI BASE SECTION parts List

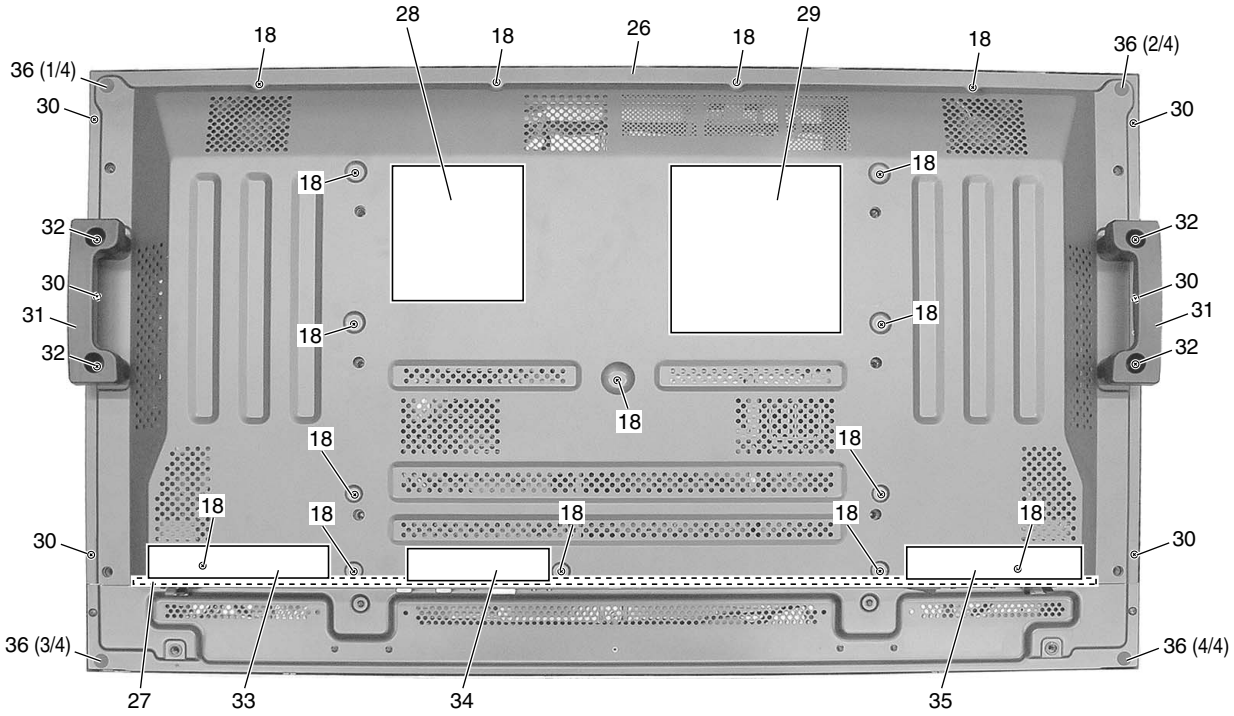
Mark	No.	Description	Part No.
	1	AUDIO AMP Assy	AWZ6848
	2	RGB Assy	AWZ6960
	3	VIDEO SLOT I/F Assy	See Contrast table (2)
	4	AV I/O Assy	See Contrast table (2)
	5	AV I/O I/F Assy	AWZ6859
	6	Multi Base (CMX)	ANA1757
NSP	7	PCB Holder	AEC1088
	8	PCB Spacer	AEC1991
	9	Gasket C-M	ANK1737
	10	Locking Card Spacer	AEC1429
	11	Ground Finger	ANG2468
	12	Clamp	AEC1884
	13	Wire Saddle	AEC1989
	14	Mini Clamp	AEC1971
	15	Double Locking Spacer	AEC1988
	16	15P/16P Wire (J106)	ADX2907
	17	•••••	
	18	10/11P Housing Wire (J110)	ADX2912
	19	10P Housing Wire (J113)	ADX2908
	20	12P Housing Wire (J112)	ADX2892
	21	13P/6P Wire (J104)	ADX2910
	22	COVER Assy	AWZ6858
	23	Guide Rail EX	AEC1994
	24	Slot Stay	ANG2608
	25	Wire Saddle	AEC1745
	26	11P Housing Wire (J111)	ADX2913
	27	Flat Clamp	AEC1879
	28	Screw	AMZ30P060FZK
	29	Screw	PMB30P060FNI
	30	Screw	VBB30P080FNI
	31	Pin Grommet	AEC1015
	32	Video Stay	ANG2607
	33	Gasket M-T150	ANK1741
	34	Shield Sheet	AEC2004

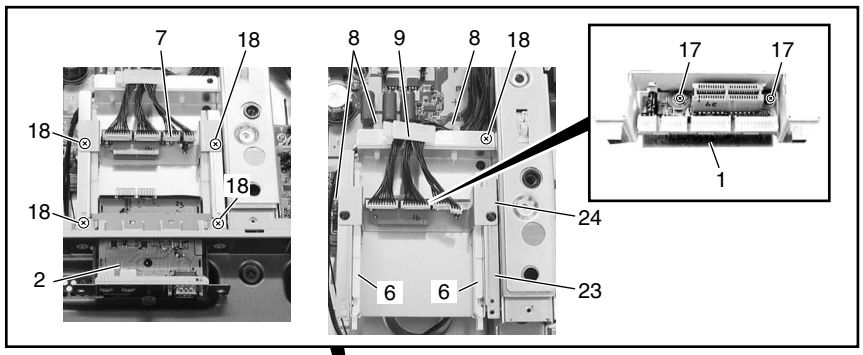
(2) CONTRAST TABLE

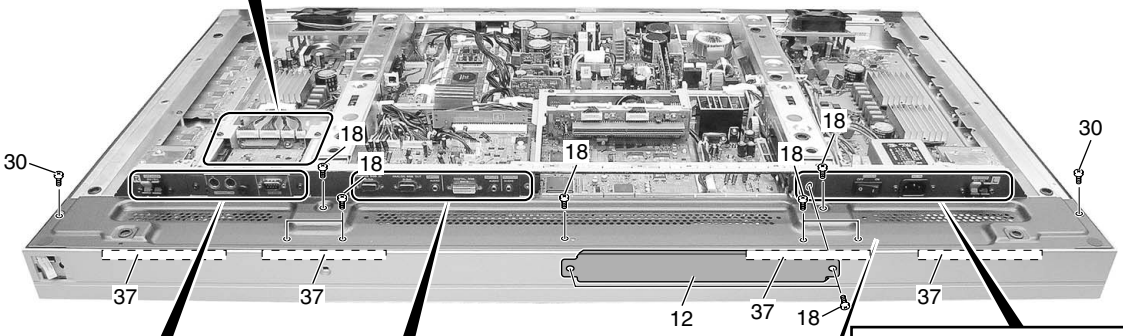
PDP-434CMX/LUC, PDP-43MXE1/LDFK and PDP-43MXE1-S/LDFK are constructed the same except for the following:

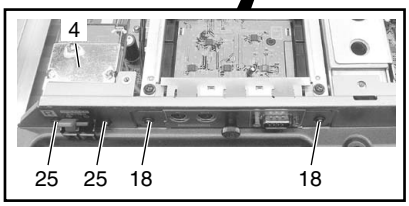
Mark	No.	Symbol and Description	PDP-434CMX/ LUC	PDP-43MXE1/ LDFK	PDP-43MXE1-S/ LDFK
	3	VIDEO SLOT I/F Assy	AWZ6851	AWZ6901	AWZ6901
	4	AV I/O Assy	AWZ6894	AWZ6895	AWZ6895

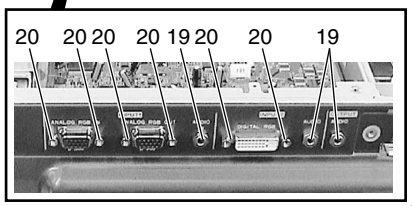
2.6 TERMINAL PANEL and REAR SECTION

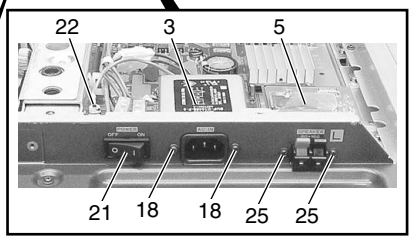


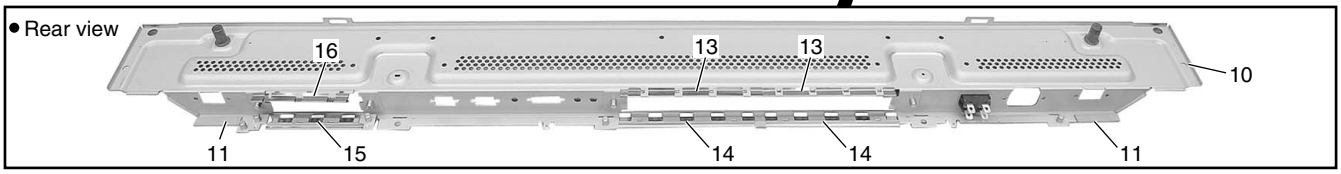












TERMINAL PANEL and REAR SECTION parts List

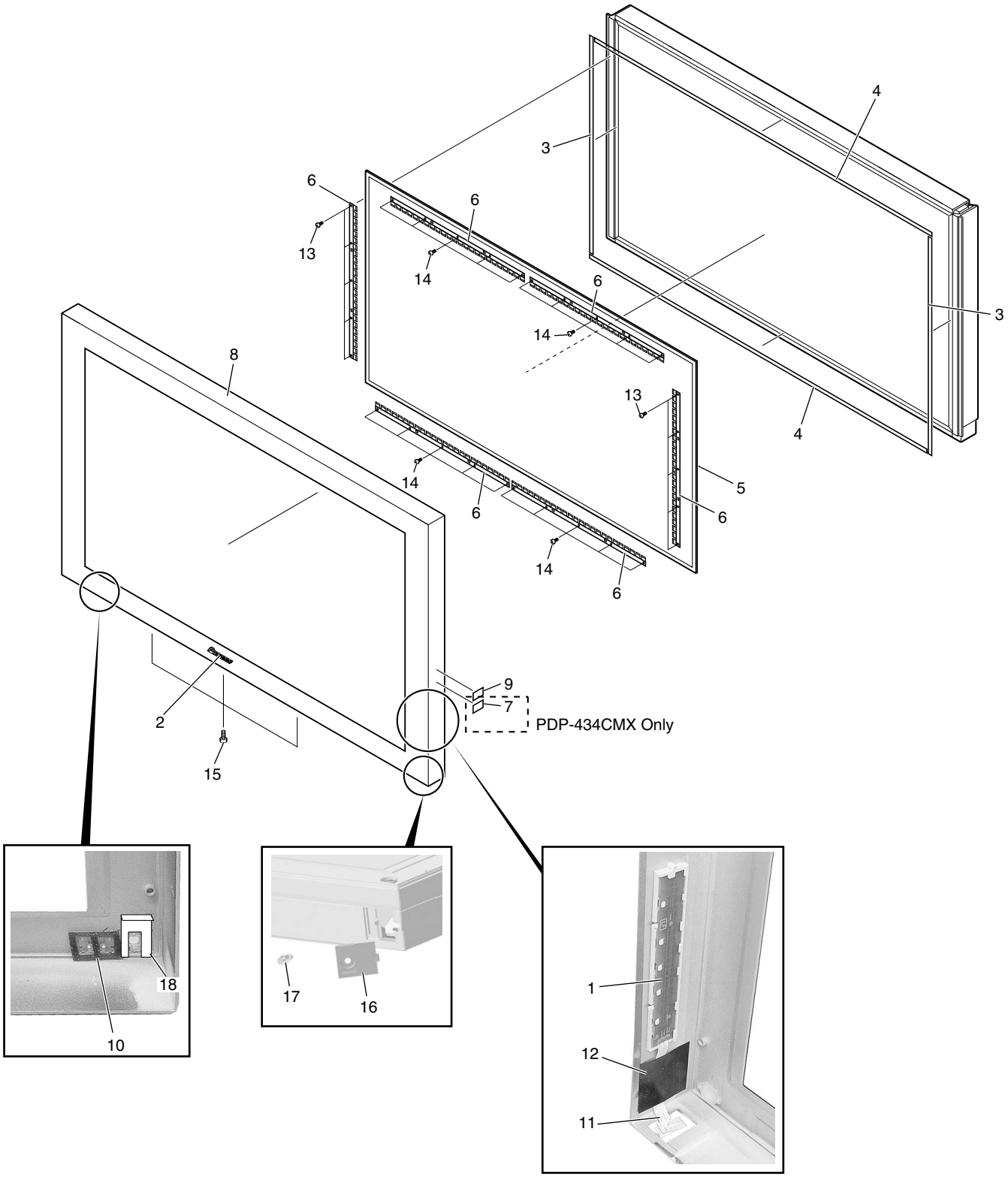
Mark	No.	Description	Part No.
	1	COMM SLOT I/F Assy	AWZ6850
	2	COMM SLOT Assy	AWZ6849
⚠	3	AC Inlet (CN1)	AKP1244
	4	SP TERMINAL R Assy	AWZ6857
	5	SP TERMINAL L Assy	AWZ6856
	6	Guide Rail EX	AEC1994
	7	6P Housing Wire (J108)	ADX2911
	8	Wire Saddle	AEC1745
	9	Clamp	AEC1884
	10	Terminal Panel (43M)	ANG2612
	11	Gasket SP-T	ANK1734
	12	Slot Panel 262(N)	ANG2610
	13	Slot Spring B126	ABK1033
	14	Slot Spring T130	ABK1032
	15	Slot Spring T94	ABK1034
	16	Slot Spring B92	ABK1035
	17	Screw	VBB30P080FNI
	18	Screw	AMZ30P060FZK
	19	Hexagon Head Nut	ABN1040
	20	Hexagon Head Screw	BBA1051
⚠	21	Power Switch (S1)	ASG1094
	22	Housing Wire (MX)(J116)	ADX2896
	23	COMM Stay A	ANG2605
	24	COMM Stay B	ANG2606
	25	Screw	APZ30P080FZK
	26	Rear Case (43M)	ANE1624
	27	Gasket T-R43	ANK1736
NSP	28	Name Label	See Contrast table (2)
	29	Caution Label (M)	AAX3048
	30	Screw	TBZ40P080FZK
	31	Grip	AMR3380
	32	Screw	HMB50P140FZK
	33	Terminal Label R (43M)	AAX3050
	34	Terminal Label C (M)	AAX3064
	35	Terminal Label L	See Contrast table (2)
	36	Rear Corner Label (15)	AAX3081
	37	Spacer	AMR3433

(2) CONTRAST TABLE

PDP-434CMX/LUC, PDP-43MXE1/LDFK and PDP-43MXE1-S/LDFK are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-434CMX/ LUC	PDP-43MXE1/ LDFK	PDP-43MXE1-S/ LDFK
NSP	28	Name Label (434CMX)	AAL2529	Not used	Not used
NSP	28	Name Label (43MXE1)	Not used	AAL2530	Not used
NSP	28	Name Label (43MXE1-S)	Not used	Not used	AAL2531
	35	Terminal Label L (43M)	AAX3062	Not used	Not used
	35	Terminal Label L (MXE)	Not used	AAX3072	AAX3072

2.7 FRONT SECTION



FRONT SECTION parts List

Mark	No.	Description	Part No.
	1	SIDE KEY Assy	AWZ6852
	2	Pioneer Name Plate	AAM1101
	3	Panel Cushion V (43M)	AED1254
	4	Panel Cushion H (43M)	AED1253
⚠	5	Protect Panel Assy (43)	AMR3345
NSP	6	Panel Holder (43)	ANG2552
	7	Display Label	See Contrast table (2)
	8	Front Case	See Contrast table (2)
	9	Energy Star Label	See Contrast table (2)
	10	Blind Cushion	AEB1400
	11	Flexible Cable (J211)	ADD1265
	12	Flexible Seal	AEH1074
	13	Screw	ABZ30P060FMC
	14	Screw	APZ30P080FZK
	15	Screw	APZ30P120FZK
	16	Lead Cover	See Contrast table (2)
	17	Rivet	AEC1877
	18	Earth Plate (MX)	AMR3432

(2) CONTRAST TABLE

PDP-434CMX/LUC, PDP-43MXE1/LDFK and PDP-43MXE1-S/LDFK are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-434CMX/ LUC	PDP-43MXE1/ LDFK	PDP-43MXE1-S/ LDFK
	7	Display Label	AXX2836	Not used	Not used
	8	Front Case 434 (CMX)	AMB2790	AMB2790	Not used
	8	Front Case 434S (CMX)	Not used	Not used	AMB2791
	9	Energy Star Label	AAX2856	AAX2856	AAX2865
	16	Lead Cover (4G)	AMR3394	AMR3394	Not used
	16	Lead Cover S (4G)	Not used	Not used	AMR3395

2.8 PANEL CHASSIS (43) ASSY (AWU1098)

Panel Chassis (43) Assy (AWU1098)

• Parts List

Mark	No.	Description	Part No.
NSP		1..43 ADDRESS Assy	AWV2120
NSP		2..43 ADDRESS Assy	AWZ6793
NSP		1..43 SCAN FUKUGO Assy	AWV2023
NSP		2..43 SCAN A Assy	AWZ6796
NSP		2..43 SCAN B Assy	AWZ6797
NSP		2..X CONNECTOR A Assy	AWZ6798
NSP		2..X CONNECTOR B Assy	AWZ6799
NSP		Address Module (IC1-IC30)	AXF1124
NSP		Plasma Panel Assy (43")(V1)	AAV1250
NSP		FPC (43XGA-X)	ADY1079
NSP		FPC (43XGA-Y)	ADY1080
NSP		Chassis Assy (43)	ANA1773
		PCB Spacer	AEC1944
		PCB Support	AEC1958
		Edge Card Spacer	AEC1998
		Rivet	AMR1066
		FC Spacer	AMR3370
NSP		Adhesive	ZBA-KE3424S
NSP		Cleaner	ZLX-AP7
NSP		Tape	ZTA-8101-12
NSP		Double Faced Tape	ZTB-5015-18
NSP		Tape	ZTB-5015-9
NSP		Tape	ZTC-POLYCA-11
NSP		Tape	ZTC-POLYCA-20
NSP		Tape	ZTC-900UL-15
NSP		Wiping Cloth	ZTX-MX100-13
NSP		Film	ZTX-2102Y35-2R5
NSP		Film	ZTX-2102Y45-5
NSP		Silicone Rubber	ZTC-EM7KB0R85T-15W
NSP		Silicone Rubber	ZTX-HC50-15
NSP		Silicone Rubber	ZTX-HC20-15

2.9 PDP SERVICE ASSY 434CMX (AWU1094)

PDP SERVICE Assy (AWU1094)

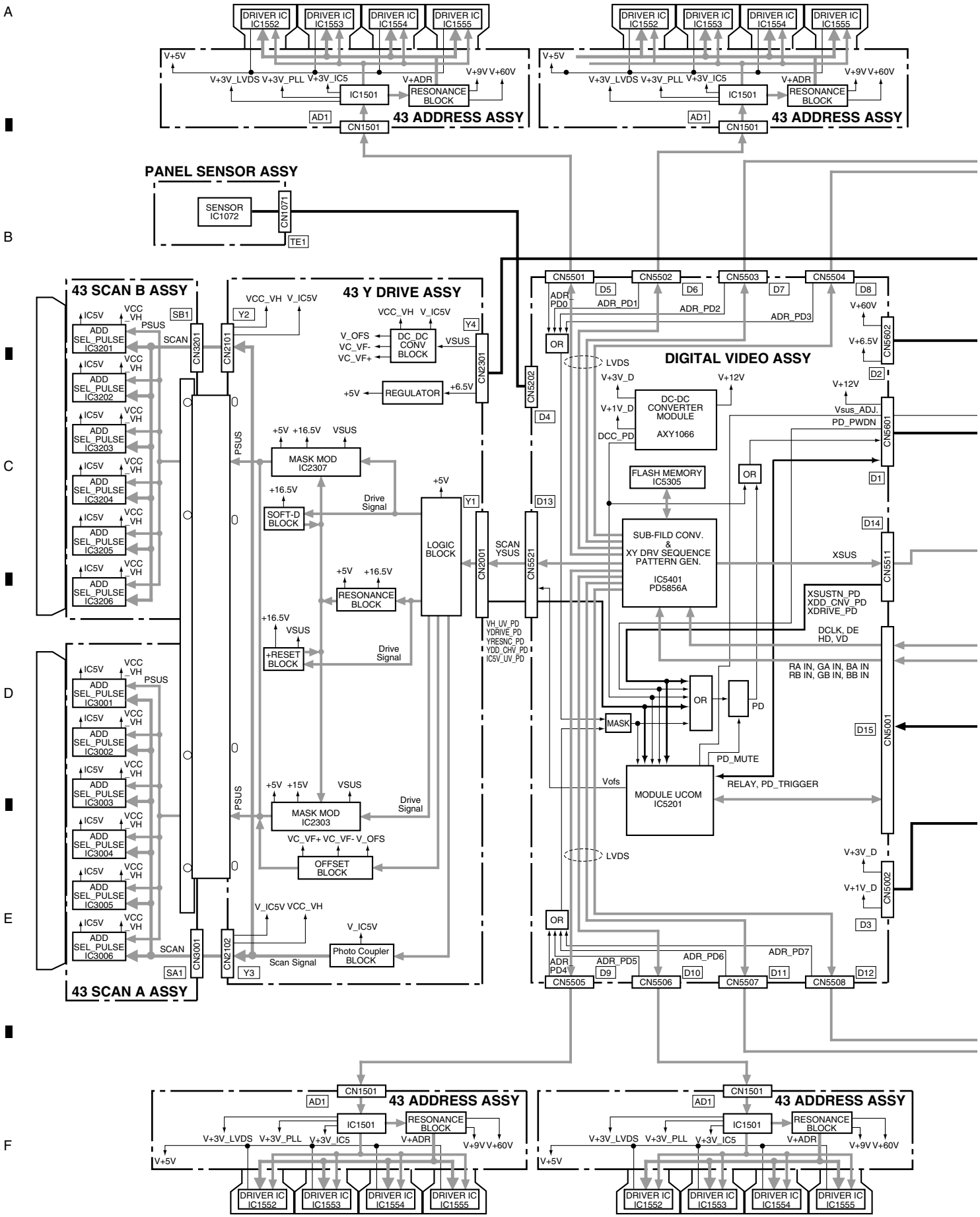
• Parts List

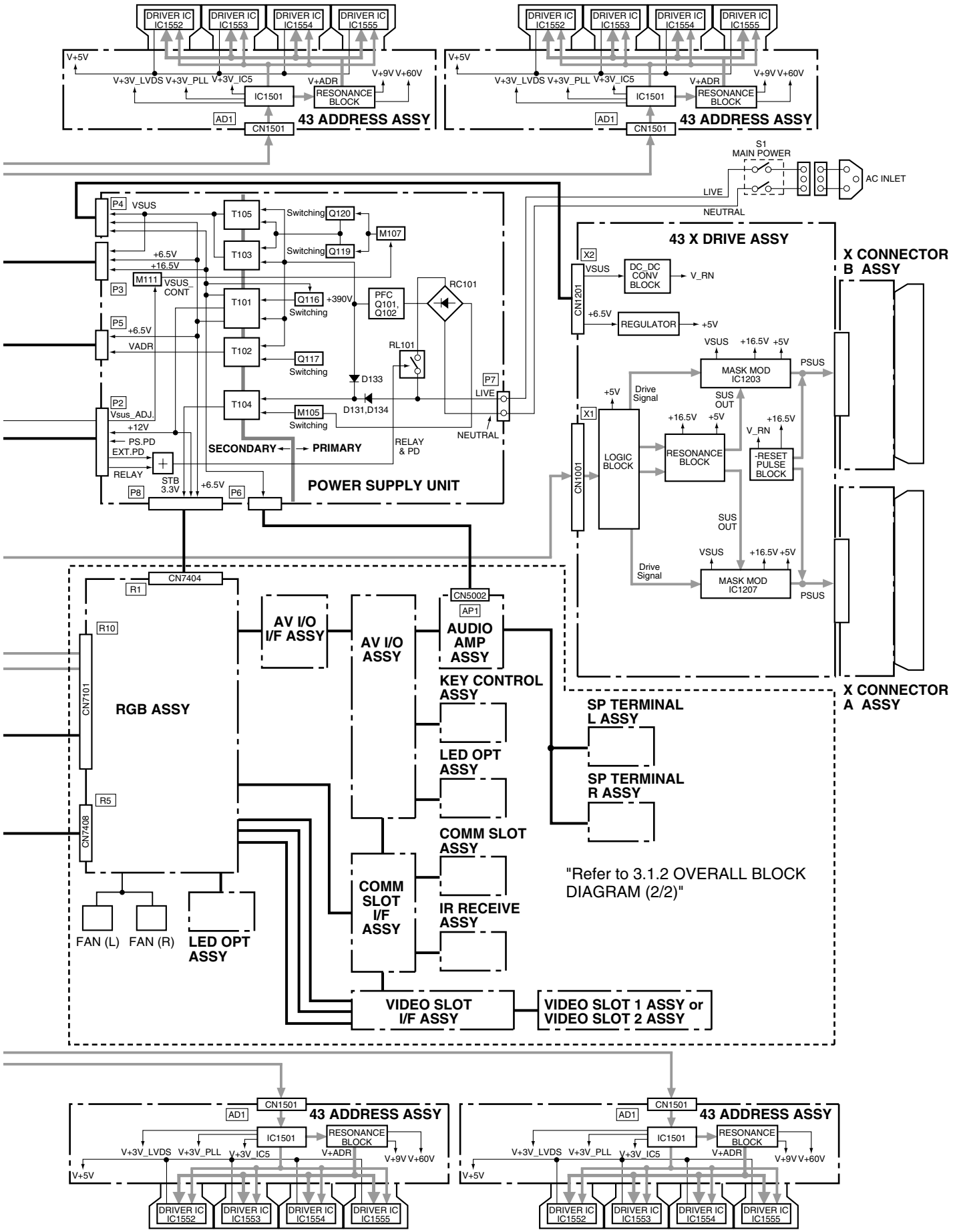
Mark	No.	Description	Part No.
NSP		P. Chassis (43) Assy	AWU1098
NSP		Front Chassis H (43)	ANA1714
		F Chassis VL (43M)	ANA1755
		F Chassis VR (43M)	ANA1756
		Rear Frame (43M)	ANG2613
		Sub Frame L Assy (43M)	ANG2623
		Sub Frame R Assy (43M)	ANG2625
NSP		SVC. Terminal P434CMX	ANG2701
		Wire Saddle	AEC1745
		PCB Support	AEC1938
		PCB Spacer	AEC1941
		PCB Spacer	AEC1947
		Locking Wire Saddle	AEC1948
		Ferrite Clamp	AEC1986
		Locking Wire Saddle	AEC1992
		Panel Cushion H (43M)	AED1253
		Panel Cushion V (43M)	AED1254
		Front Spacer (CMX)	AMR3384
		Y Drive Protection Sheet	AMR3346
		Enclosure Sheet1	AMR3405
		Enclosure Sheet2 (V)	AMR3411
		Front Case Spacer (43M)	AMR3430
		Cable Cover	AMR3431
		Caution Label	AAX3031
NSP		Drive Voltage Label	ARW1097
		Screw	AMZ30P060FZK
		Screw	AMZ30P080FMC
		Screw	APZ30P080FZK
		Screw	APZ30P120FZK
		Screw	TBZ40P080FZK
		Screw	VBB30P080FNI
		Screw	PMB30P060FNI
NSP		Front Case (434CMX SVC)	AMB2840
		Rear Case (43M)	ANE1624
		Pad (43U)	AHA2282
		Pad (43L)	AHA2283
		Carton (43)	AHD3100
NSP		Upper Carton 434CMX S	AHD3257
		Protect Sheet	AHG1331

3. BLOCK DIAGRAM AND SCHEMATIC DIAHRAM

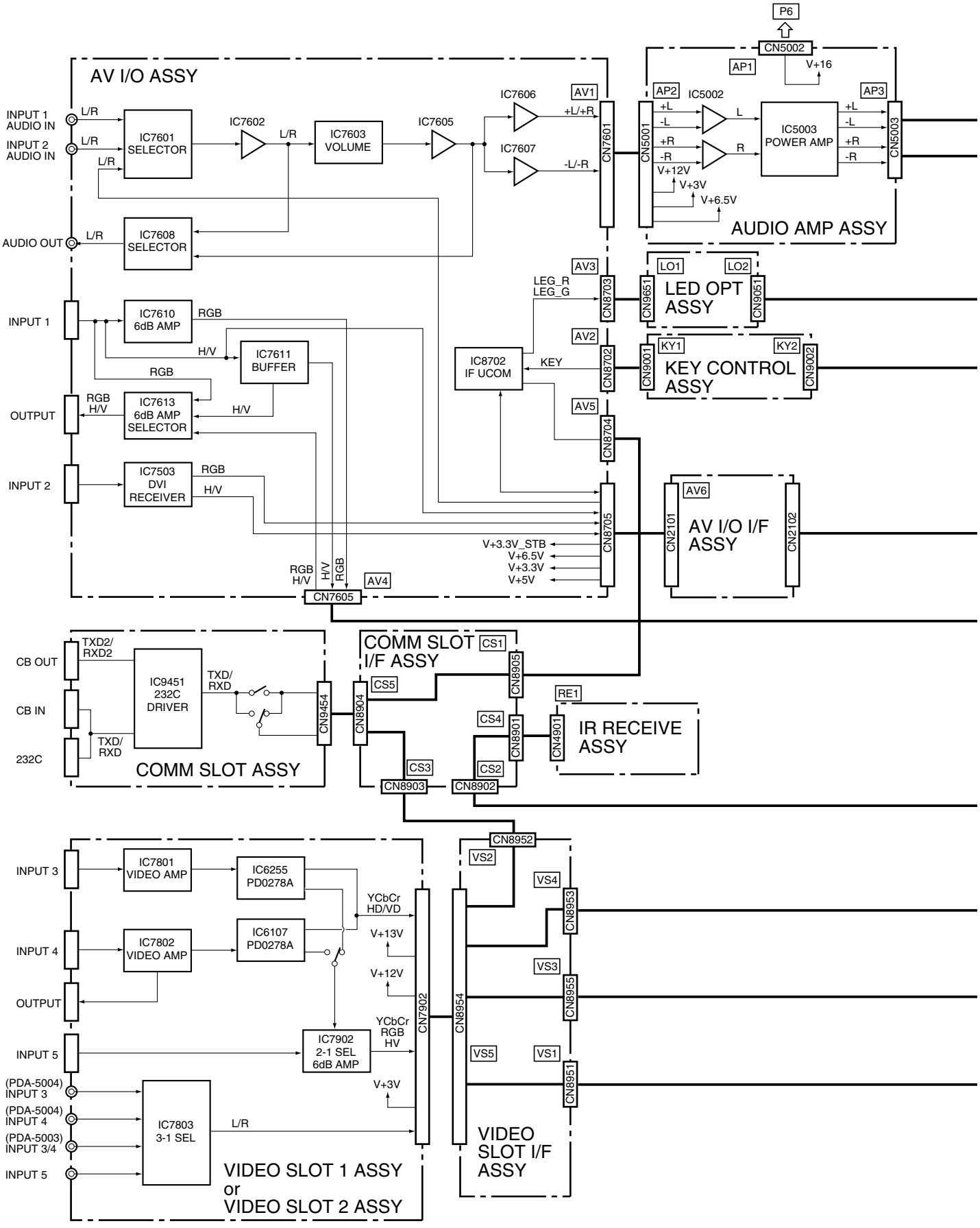
3.1 BLOCK DIAGRAM

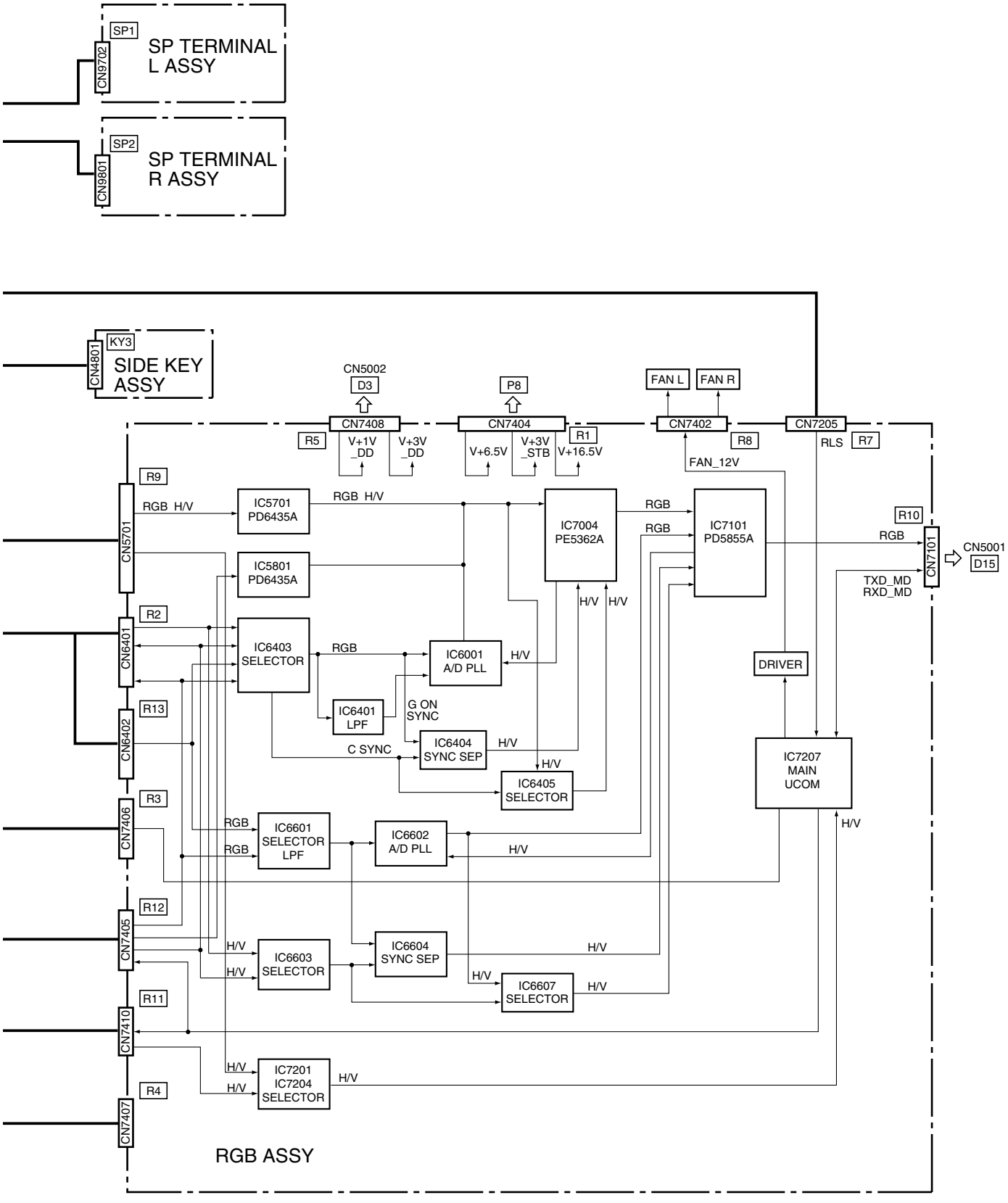
3.1.1 OVERALL BLOCK DIAGRAM (1/2)



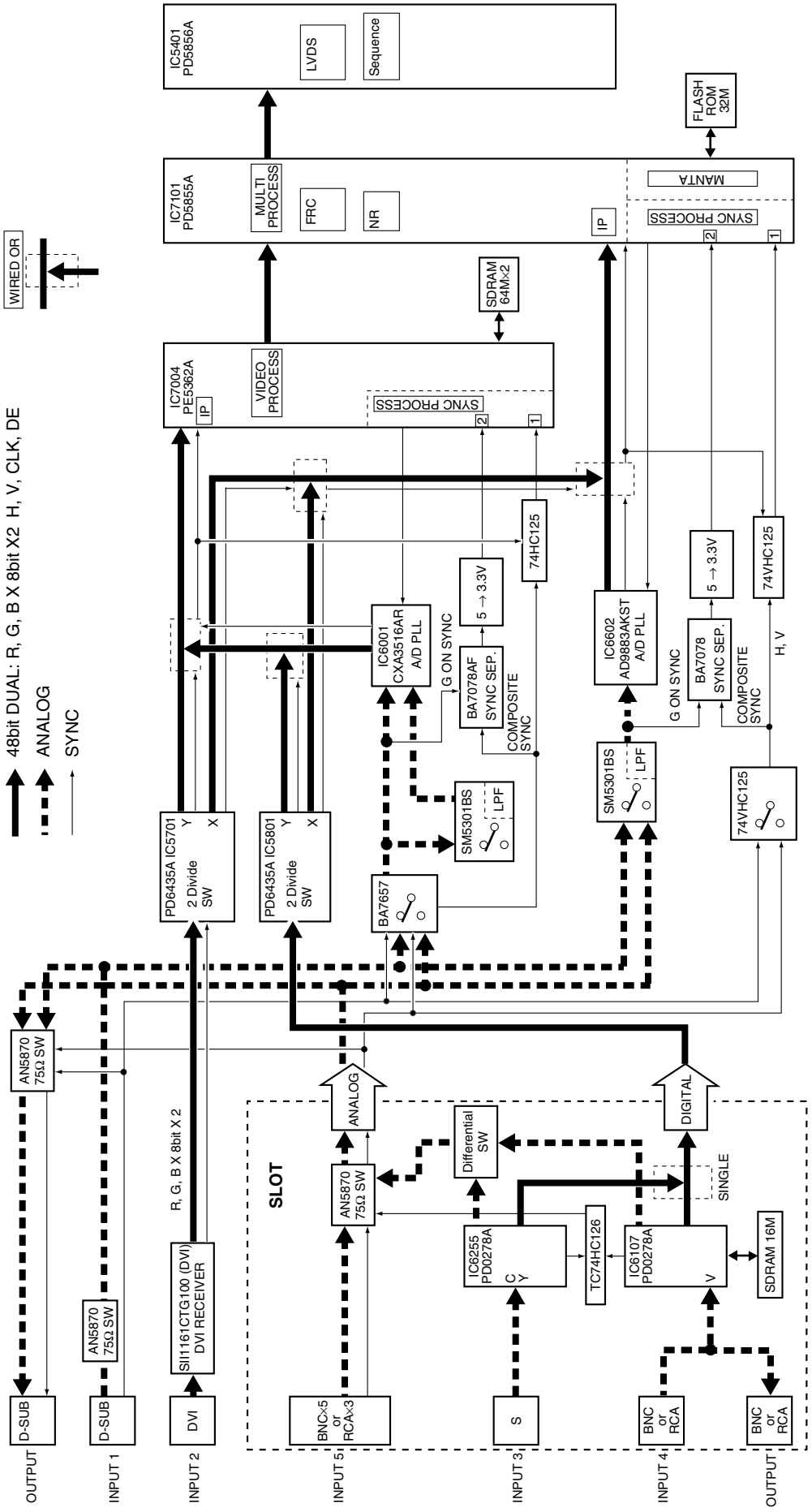

DRIVER IC IC1552
DRIVER IC IC1553
DRIVER IC IC1554
DRIVER IC IC1555
V+5V
V+3V_LVDS V+3V_PLL V+3V_IC5
V+ADR
V+9V V+60V
IC1501
RESONANCE BLOCK
AD1
CN1501
43 ADDRESS ASSY
S1
MAIN POWER
AC INLET
LIVE
NEUTRAL
P4 VSUS
T105
Switching Q120
M107
T103
Switching Q119
+6.5V
+16.5V
M111 VSUS CONT
P3
T101
Q116 +390V
Switching
PFC Q101, Q102
RC101
P5 +6.5V
VADR
T102
Q117
Switching
RL101
D133
P7 LIVE
P2 Vsus_ADJ.
+12V
PS.PD
EXT.PD
RELAY
T104
M105
Switching
D131,D134
NEUTRAL
SECONDARY → PRIMARY
RELAY & PD
STB 3.3V
+6.5V
P8
P6
POWER SUPPLY UNIT
43 X DRIVE ASSY
X2
VSUS
DC_DC CONV BLOCK
V_RN
CN1201
+6.5V
REGULATOR
+5V
VSUS +16.5V +5V
MASK MOD IC1203
PSUS
+5V
Drive Signal
SUS OUT
X1
LOGIC BLOCK
+16.5V +5V
RESONANCE BLOCK
+16.5V
V_RN
-RESET PULSE BLOCK
CN1001
SUS OUT
VSUS +16.5V +5V
Drive Signal
MASK MOD IC1207
PSUS
X CONNECTOR B ASSY
X CONNECTOR A ASSY
CN7404
R1
R10
CN7101
RGB ASSY
R5
CN7408
AV I/O I/F ASSY
AV I/O ASSY
CN5002
AP1
AUDIO AMP ASSY
KEY CONTROL ASSY
LED OPT ASSY
COMM SLOT ASSY
COMM SLOT I/F ASSY
IR RECEIVE ASSY
SP TERMINAL L ASSY
SP TERMINAL R ASSY
FAN (L)
FAN (R)
LED OPT ASSY
VIDEO SLOT I/F ASSY
VIDEO SLOT 1 ASSY or VIDEO SLOT 2 ASSY
"Refer to 3.1.2 OVERALL BLOCK DIAGRAM (2/2)"

3.1.2 OVERALL BLOCK DIAGRAM (2/2)

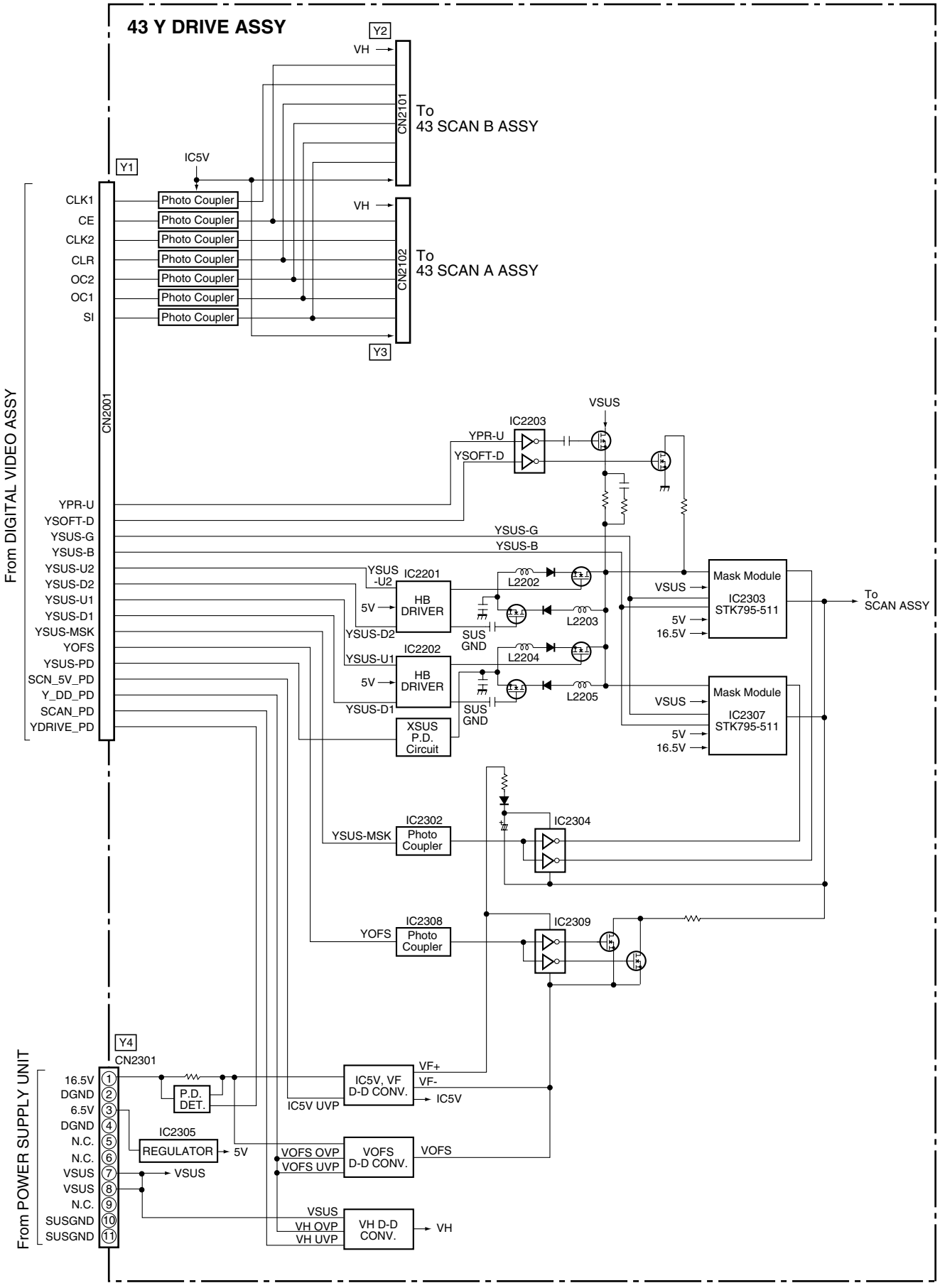



SP1
CN9702
SP TERMINAL L ASSY
SP2
CN9801
SP TERMINAL R ASSY
KY3
CN4801
SIDE KEY ASSY
CN5002
D3
P8
FAN L
FAN R
CN7408
CN7404
CN7402
CN7205
R5
V+1V _DD
V+3V _DD
V+6.5V
V+3V _STB
V+16.5V
R1
R8
RLS
R7
FAN_12V
R9
CN5701
RGB H/V
IC5701 PD6435A
IC5801 PD6435A
IC7004 PE5362A
IC7101 PD5855A
R10
CN7101
CN5001
D15
TXD_MD
RXD_MD
R2
CN6401
IC6403 SELECTOR
IC6001 A/D PLL
IC6401 LPF
G ON SYNC
R13
CN6402
C SYNC
IC6404 SYNC SEP
IC6405 SELECTOR
DRIVER
IC7207 MAIN UCOM
R3
CN7406
IC6601 SELECTOR LPF
IC6602 A/D PLL
H/V
R12
CN7405
IC6603 SELECTOR
IC6604 SYNC SEP
IC6607 SELECTOR
R11
CN7410
IC7201 IC7204 SELECTOR
R4
CN7407
RGB ASSY

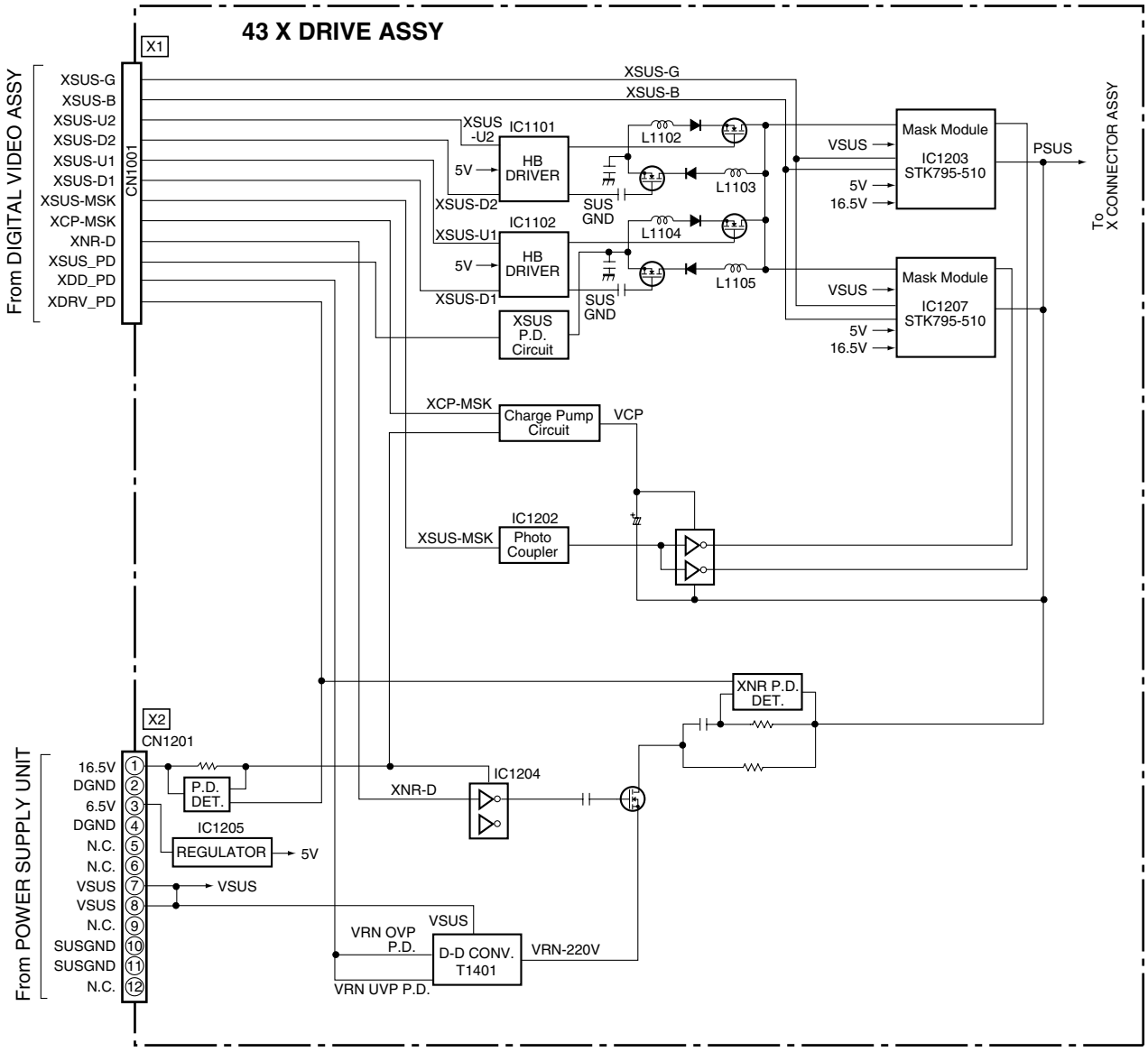
3.1.3 SIGNAL ROUTE



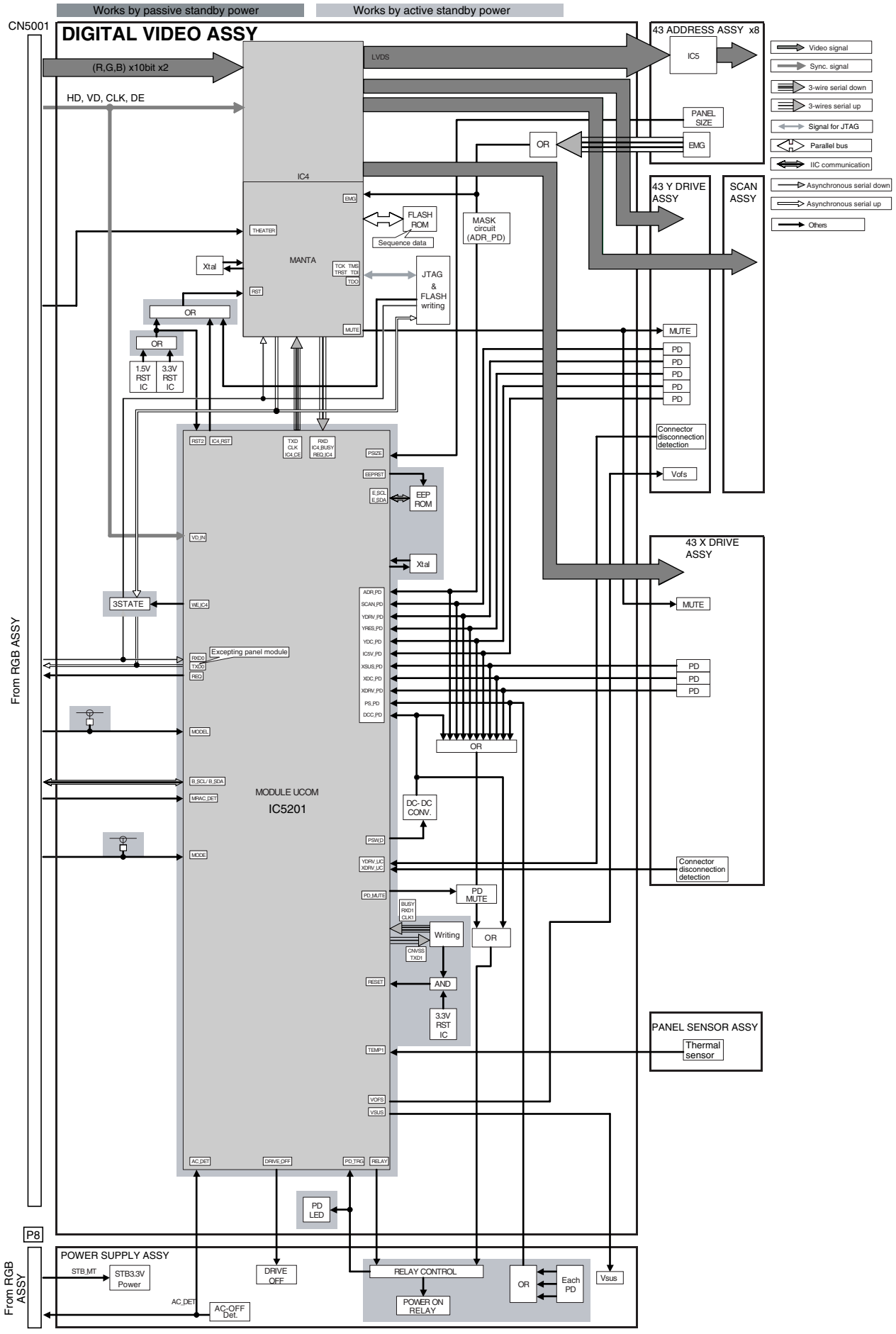
3.1.4 43 Y DRIVE ASSY



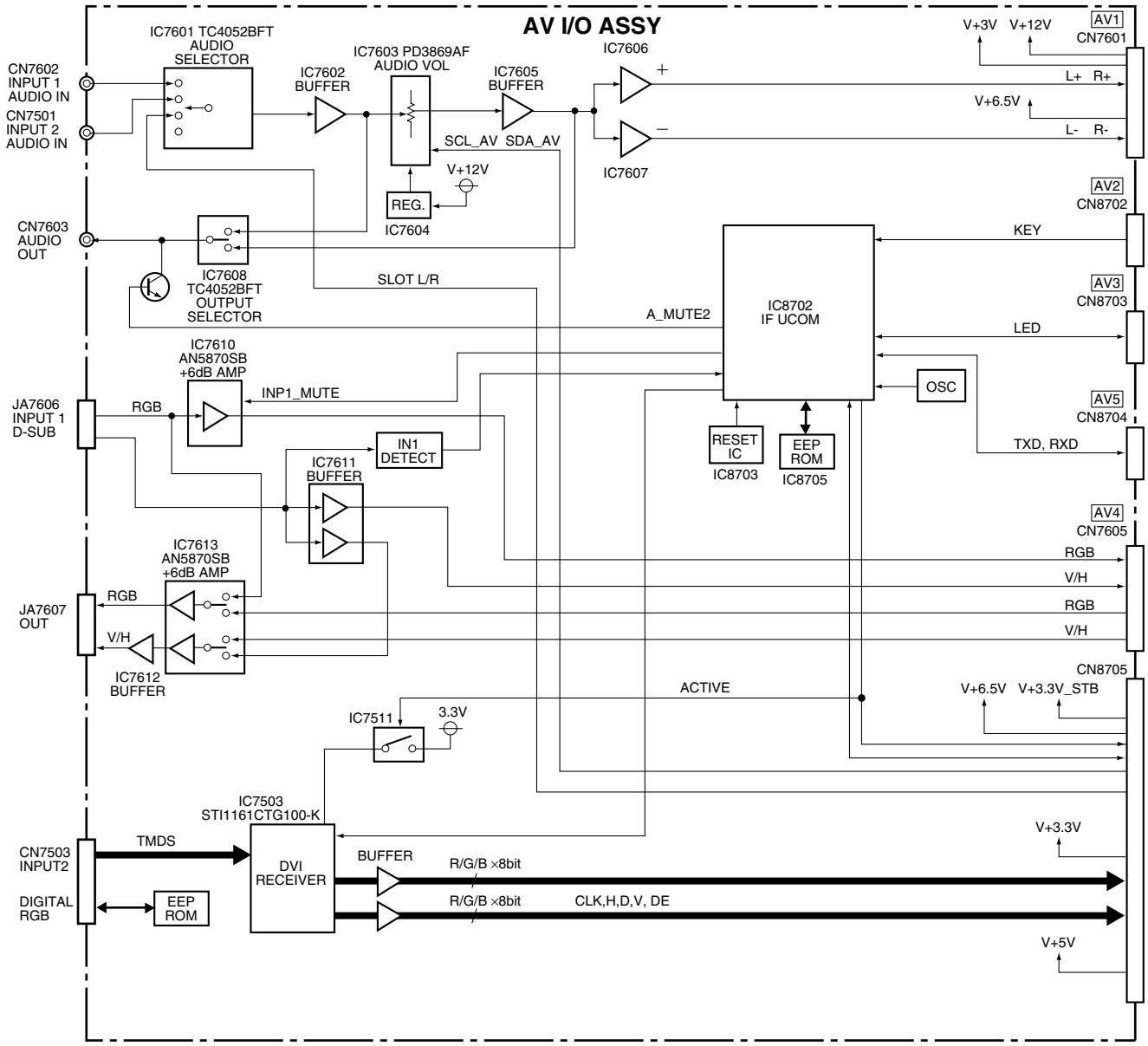
3.1.5 43 X DRIVE ASSY



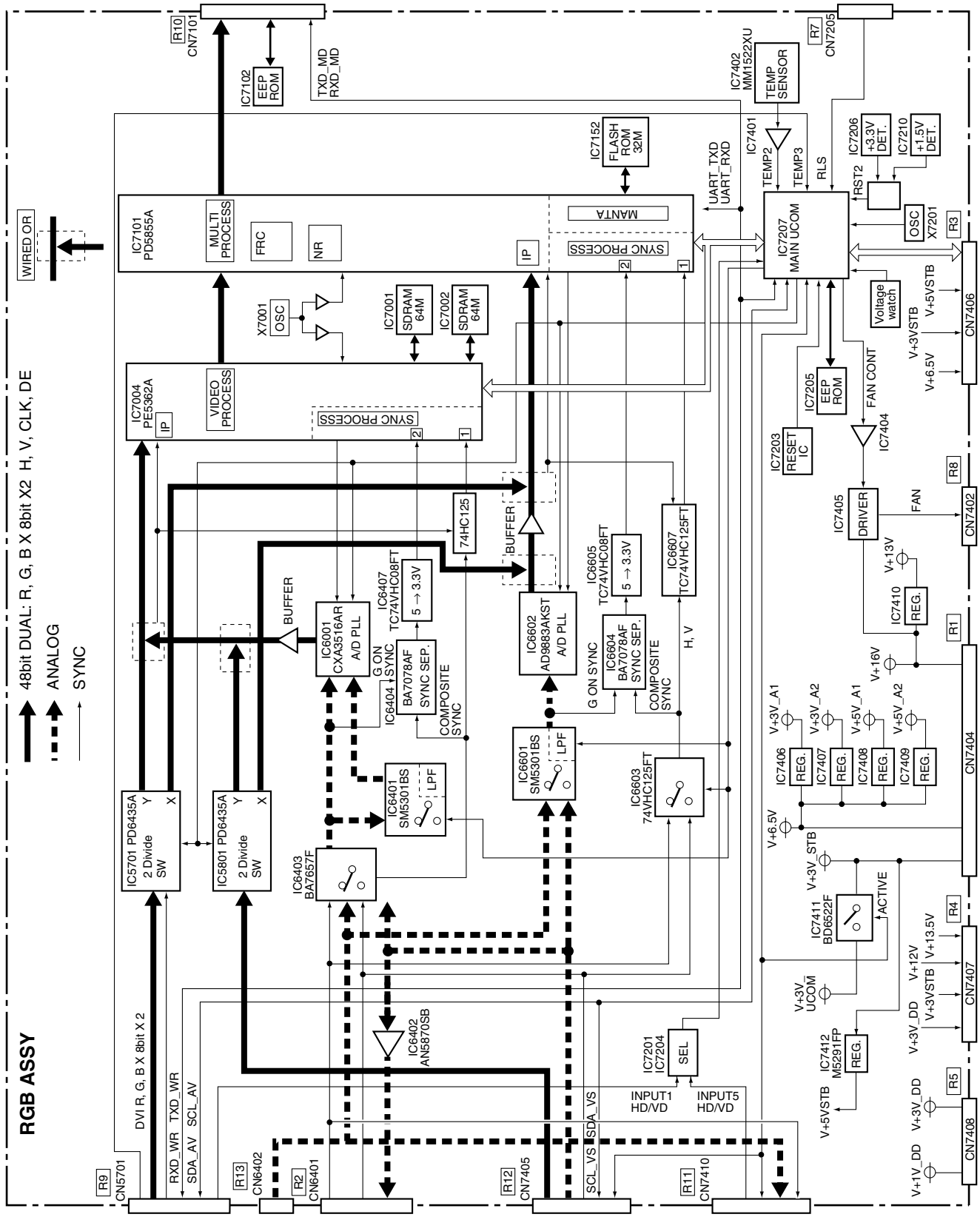
3.1.6 DIGITAL VIDEO ASSY



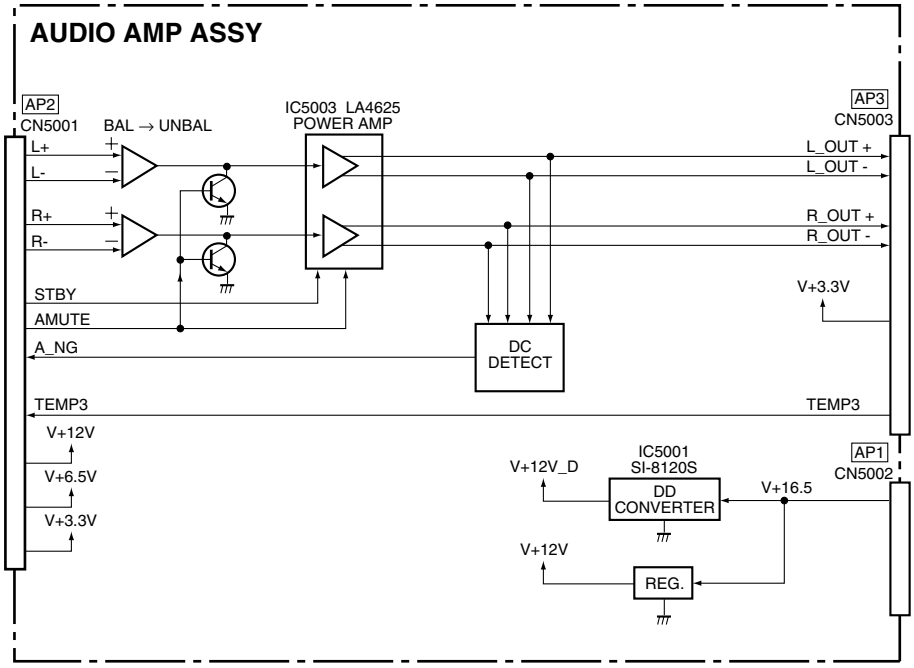
3.1.7 AV I/O ASSY

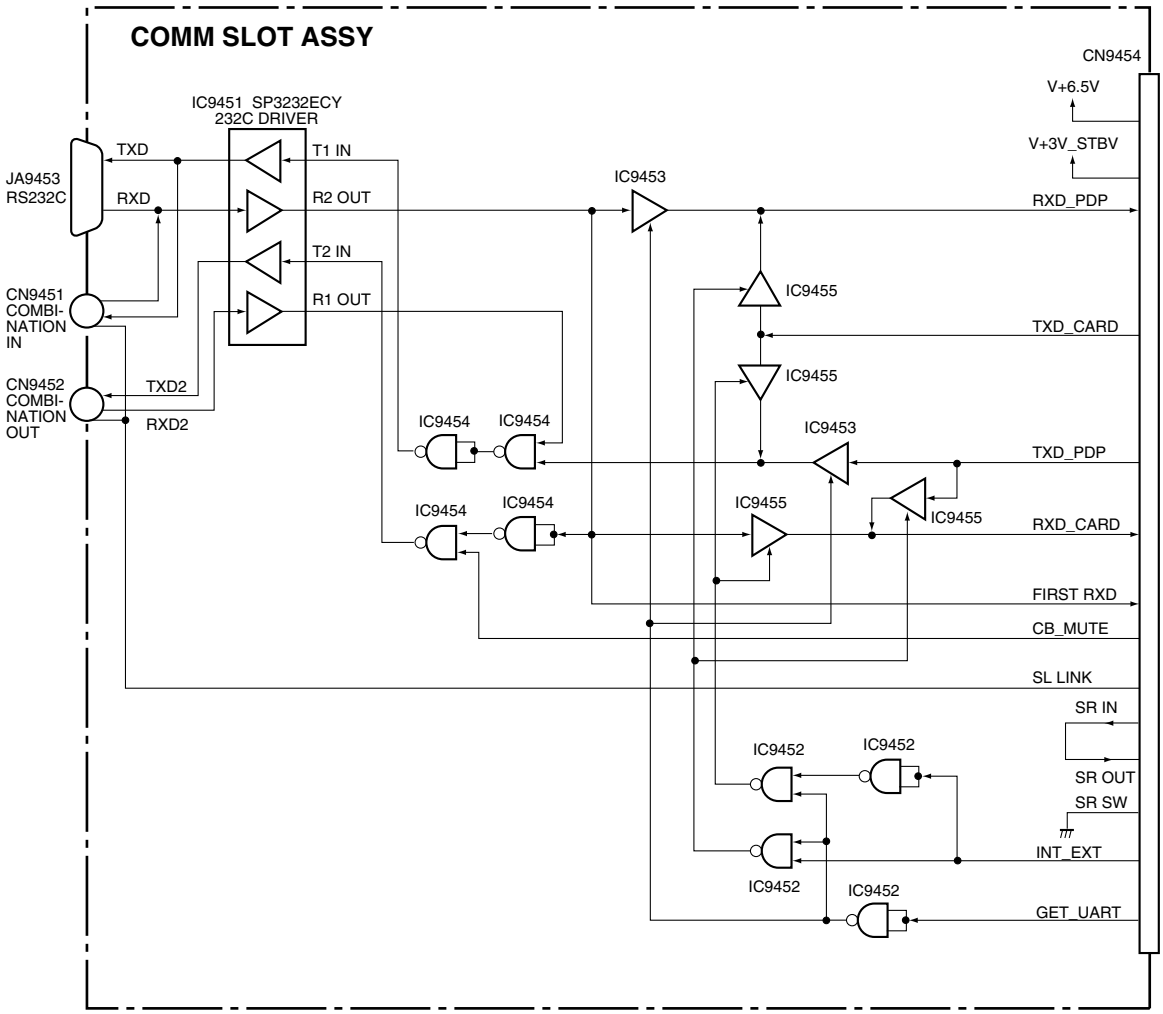


3.1.8 RGB ASSY


RGB ASSY
48bit DUAL: R, G, B X 8bit X2 H, V, CLK, DE
ANALOG
SYNC
WIRED-OR
DVI R, G, B X 8bit X 2
RXD_WR TXD_WR
SDA_AV SCL_AV
R9 CN5701
R13 CN6402
R2 CN6401
R12 CN7405
R11 CN7410
SCL_VS SDA_VS
INPUT1 HD/VD
INPUT5 HD/VD
IC5701 PD6435A 2 Divide SW
IC5801 PD6435A 2 Divide SW
IC6403 BA7657F
IC6402 AN5870SB
IC6401 SM5301BS LPF
IC6001 CXA3516AR A/D PLL
IC6404 SYNC SEP. BA7078AF
IC6407 TC74VHC08FT 5 → 3.3V
BUFFER
74HC125
IC6602 AD9883AKST A/D PLL
IC6601 SM5301BS LPF
IC6604 SYNC SEP. BA7078AF
IC6605 TC74VHC08FT 5 → 3.3V
IC6607 TC74VHC125FT
IC6603 74VHC125FT
G ON SYNC
COMPOSITE SYNC
H, V
IC7101 PD5855A
MULTI PROCESS
FRC
NR
MANTA
SYNC PROCESS
IP
IC7004 PE5362A
VIDEO PROCESS
X7001 OSC
IC7001 SDRAM 64M
IC7002 SDRAM 64M
R10 CN7101
IC7102 EEP ROM
TXD_MD RXD_MD
IC7152 FLASH ROM 32M
IC7207 MAIN UCOM
IC7402 MM1522XU TEMP SENSOR
IC7401
TEMP2
TEMP3
RLS
UART_TXD UART_RXD
RST2
IC7206 +3.3V DET.
IC7210 +1.5V DET.
OSC X7201
R3
R7 CN7205
Voltage watch
V+5VSTB
V+3VSTB
V+6.5V
CN7406
IC7205 EEP ROM
FAN CONT
IC7404
IC7203 RESET IC
IC7405 DRIVER
FAN
R8
CN7402
IC7410 REG.
V+13V
V+16V
R1
CN7404
IC7406 REG.
IC7407 REG.
IC7408 REG.
IC7409 REG.
V+3V_A1
V+3V_A2
V+5V_A1
V+5V_A2
V+3V_STB
IC7411 BD6522F
ACTIVE
R4
CN7407
V+3V UCOM
V+12V
V+13.5V
V+3V_DD
IC7412 M52291FP REG.
IC7201 IC7204 SEL
R5
CN7408
V+1V_DD

3.1.9 AUDIO AMP and COMM SLOT ASSYS



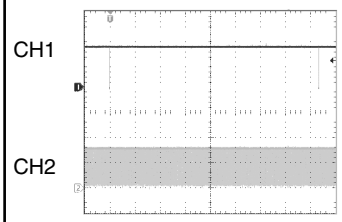


3.2 WAVEFORMS

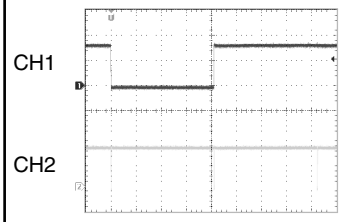
DIGITAL VIDEO ASSY (4/6)

• DIGITAL I/F BLOCK

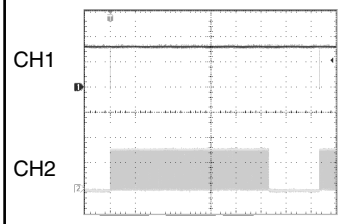
① CH1: K5003 (VD)
CH2: K5002 (HD)
V: 2V/div. H: 2msec/div.



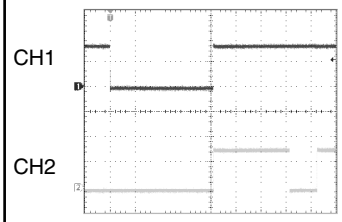
① CH1: K5003 (VD)
CH2: K5002 (HD)
V: 2V/div. H: 4µsec/div.



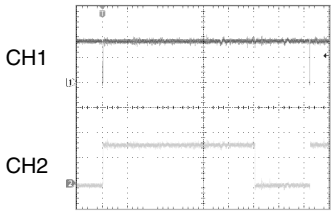
② CH1: K5003 (VD)
CH2: K5004 (DE)
V: 2V/div. H: 2msec/div.



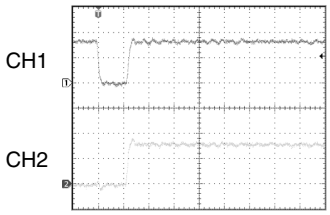
② CH1: K5003 (VD)
CH2: K5004 (DE)
V: 2V/div. H: 4µsec/div.



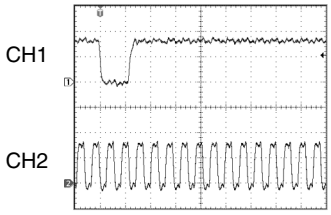
③ CH1: K5002 (HD)
CH2: K5004 (DE)
V: 2V/div. H: 2µsec/div.



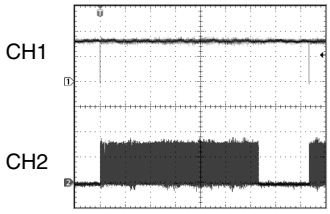
③ CH1: K5002 (HD)
CH2: K5004 (DE)
V: 2V/div. H: 40nsec/div.



④ CH1: K5002 (HD)
CH2: CN5001-pin 77 (DCLK)
V: 2V/div. H: 40nsec/div.



⑤ CH1: K5003 (VD)
CH2: CN5001-pin 88 (RA_IN2)
V: 2V/div. H: 2msec/div.

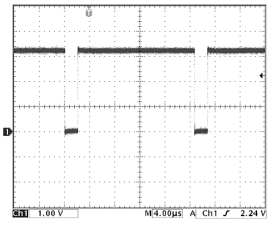


RGB ASSY (2/10, 3/10, 4/10)

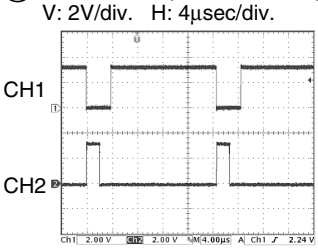
MAIN AD BLOCK, MAIN LPF BLOCK, SUS LPF&AD BLOCK

Input: INPUT 1
Signal: RGB, XGA 60 Hz, Color-bar
⑫ to ㉑, ㉔ : With two screens, a SUB screen chooses INPUT1 and observes it.

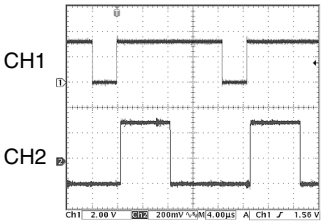
④ K6404 (HD1_MAIN)
V: 1V/div. H: 4µsec/div.



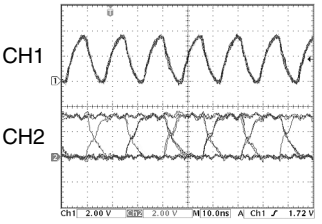
⑪ CH1: IK6012 (PLLHD_MAIN)
V: 2V/div. H: 4µsec/div.
⑨ CH2: K6013 (CLAMP_MAIN)
V: 2V/div. H: 4µsec/div.



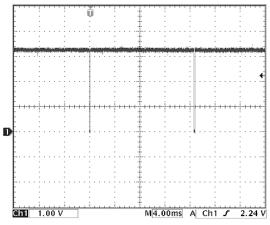
㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4µsec/div.
⑮ CH2: Foot of C6614 (GAIN)
V: 200mV/div. H: 4µsec/div.



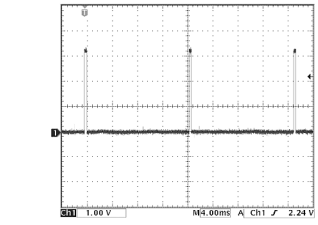
⑲ CH1: Foot of R6628 (DATACK)
V: 2V/div. H:10nsec/div.
㉑ CH2: Foot of R6644 (RED0)
V: 2V/div. H: 10nsec/div.



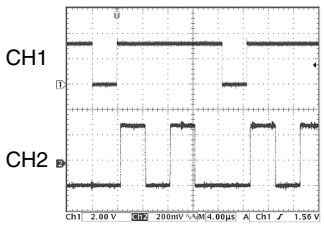
⑤ K6403 (VD1_MAIN)
V: 1V/div. H: 4msec/div.



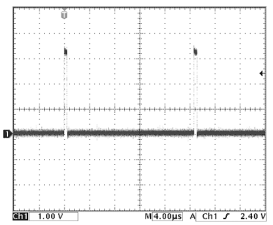
⑩ K6011 (PLLHOLD_MAIN)
V: 1V/div. H: 4msec/div.



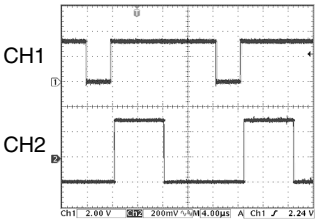
㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4µsec/div.
⑯ CH2: Foot of C6623 (RAIN)
V: 200mV/div. H: 4µsec/div.



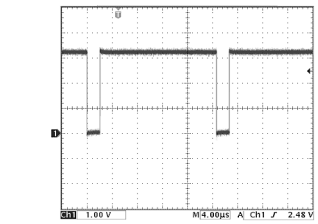
⑳ Foot of R6637 (HSOUT)
V: 1V/div. H: 4µsec/div.



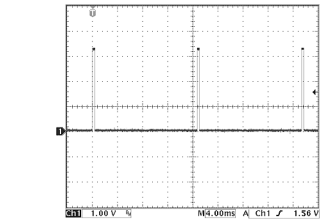
⑪ CH1: K6012 (PLLHD_MAIN)
V: 2V/div. H: 4µsec/div.
⑥ CH2: K6001 (G)
V: 200mV/div. H: 4µsec/div.



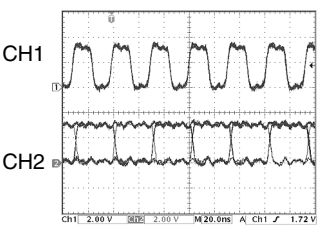
⑫ K6605 (HD1_SUB)
V: 1V/div. H: 4µsec/div.



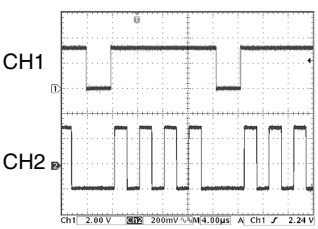
⑰ K6602 (PLL HOLD_SUB)
V: 1V/div. H: 4msec/div.



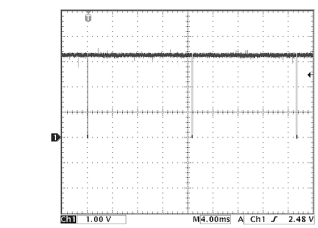
㉒ CH1: IC6008-pin2 (CLK)
V: 2V/div. H:20nsec/div.
㉓ CH2: IC6006-pin 9 (RB0)
V: 2V/div. H: 20nsec/div.



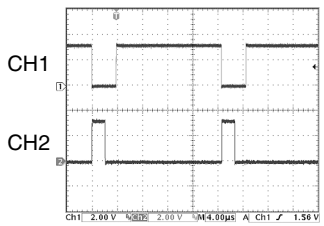
⑪ CH1: K6012 (PLLHD_MAIN)
V: 2V/div. H: 4µsec/div.
⑦ CH2: K6002 (B)
V: 200mV/div. H: 4µsec/div.



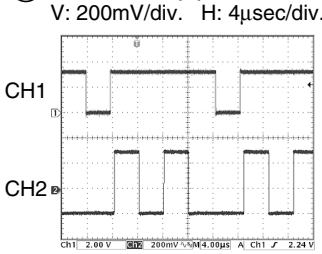
⑬ K6604 (VD1_SUB)
V: 1V/div. H: 4msec/div.



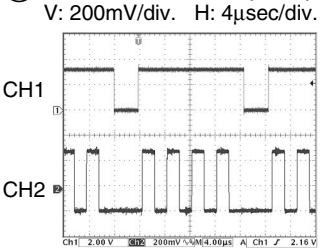
㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4µsec/div.
⑱ CH2: K6603 (CLAMP)
V: 2V/div. H: 4µsec/div.



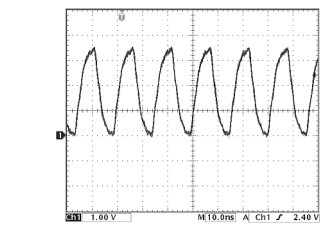
⑪ CH1: K6012 (PLLHD_MAIN)
V: 2V/div. H: 4µsec/div.
⑧ CH2: K6003 (R)
V: 200mV/div. H: 4µsec/div.



㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4µsec/div.
⑭ CH2: Foot of C6609 (BAIN)
V: 200mV/div. H: 4µsec/div.



⑲ Foot of R6628 (DATACK)
V: 1V/div. H: 10nsec/div.



AV I/O ASSY (1/3)

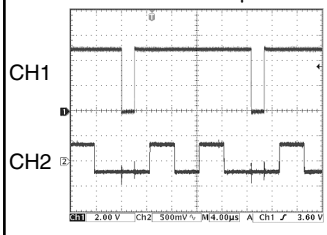
• VIDEO **• AV/IO BLOCK** • AUDIO
Input: INPUT 1
Signal: RGB, XGA 60 Hz, Color-bar

Input: INPUT 1
Signal: 200mVrms, 1 kHz input, VOL MAX

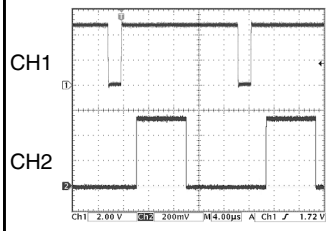
AUDIO AMP ASSY

• AUDIO
Input: INPUT 1
Signal: 200mVrms, 1 kHz input, VOL MAX

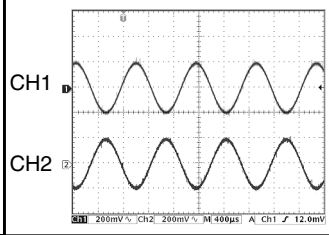
④ CH1: CN7605-pin 10(HD_IO)
V: 2V/div. H: 4µsec/div.
① CH2: CN7605-pin 16 (R_IO)
V: 500mV/div. H: 4µsec/div.



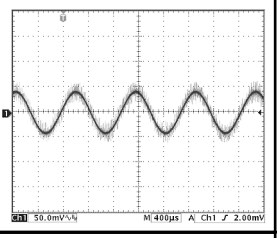
⑩ CH1: JA7606-pin 13 (HD)
V: 2V/div. H: 4µsec/div.
⑦ CH2: JA7606-pin 2 (G)
V: 200mV/div. H: 4µsec/div.



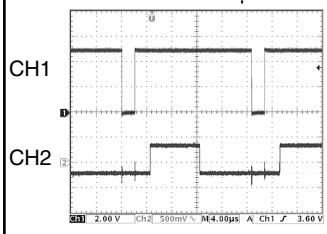
⑬ CH1: CN7601-pin 14 (+L_OUT)
V: 200mV/div. H: 400µsec/div.
⑭ CH2: CN7601-pin 13 (-L_OUT)
V: 200mV/div. H: 400µsec/div.



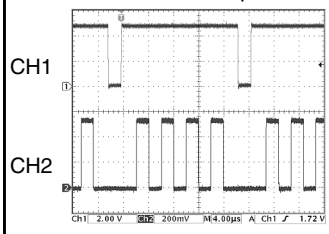
⑮ IC5003-pin 1 (L_AUDIO)
V: 50mV/div. H: 400µsec/div.



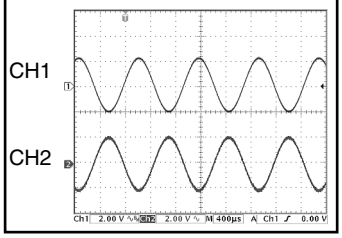
④ CH1: CN7605-pin 10(HD_IO)
V: 2V/div. H: 4µsec/div.
② CH2: CN7605-pin 14 (G_IO)
V: 500mV/div. H: 4µsec/div.



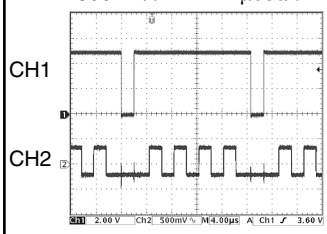
⑩ CH1: JA7606-pin 13 (HD)
V: 2V/div. H: 4µsec/div.
⑧ CH2: JA7606-pin 3 (B)
V: 200mV/div. H: 4µsec/div.



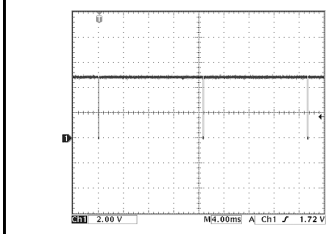
⑯ CH1: CN5003-pin 9 (L-)
V: 2V/div. H: 400µsec/div.
⑰ CH2: CN5003-pin 8 (L+)
V: 2V/div. H: 400µsec/div.



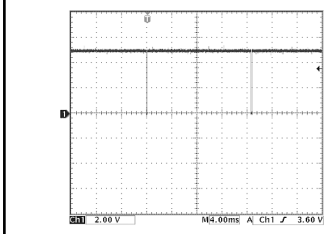
④ CH1: CN7605-pin 10(HD_IO)
V: 2V/div. H: 4µsec/div.
③ CH2: CN7605-pin 12 (B_IO)
V: 500mV/div. H: 4µsec/div.



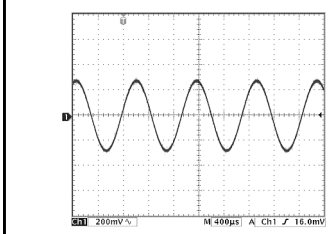
⑨ JA7606-pin 14 (VD)
V: 2V/div. H: 4msec/div.



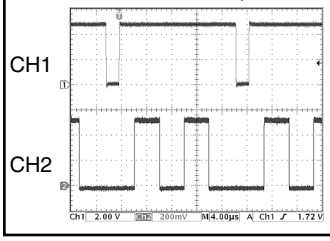
⑤ CN7605-pin 9 (VD_IO)
V: 2V/div. H: 4msec/div.



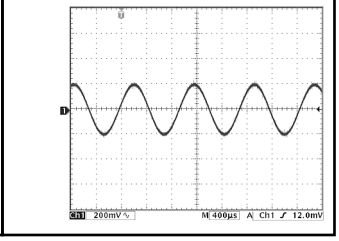
⑪ IC7601-pin 12 (L_AUDIO)
V: 200mV/div. H: 400µsec/div.



⑩ CH1: JA7606-pin 13 (HD)
V: 2V/div. H: 4µsec/div.
⑥ CH2: JA7606-pin 1 (R)
V: 200mV/div. H: 4µsec/div.



⑫ IC7603-pin 14 (L_AUDIO)
V: 200mV/div. H: 400µsec/div.



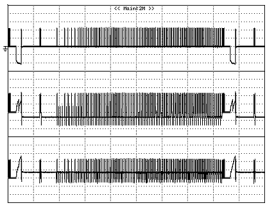
43 X DRIVE ASSY, 43 Y DRIVE ASSY and 43 SCAN A ASSY
SUS BLOCK, X LOGIC BLOCK, Y LOGIC BLOCK, Y SUS BLOCK, SCAN A BLOCK

① Drive Output Waveform (1 field,color-bar)

CH1: R1226 (XPSUS) - K1201 (SUSGND) (43 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND) (43 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND) (43 SCAN A ASSY)

V: 100V/div. H: 2msec/div.

CH1
CH2
CH3



② Reset Pulse

CH1: R1226 (XPSUS) - K1201 (SUSGND) (43 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND) (43 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND) (43 SCAN A ASSY)

V: 100V/div. H: 100µsec/div.

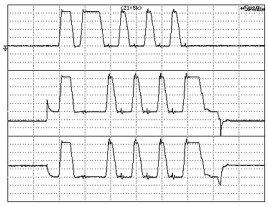
CH1
CH2
CH3

③ Sustain Pulse (1 sub-sub-field)

CH1: R1226 (XPSUS) - K1201 (SUSGND) (43 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND) (43 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND) (43 SCAN A ASSY)

V: 50V/div. H: 5µsec/div.

CH1
CH2
CH3

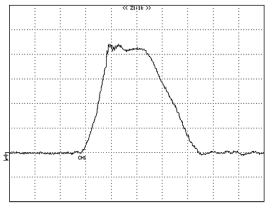


④ Sustain Waveform

CH1: R2348 (YPSUS) - K2301 (SUSGND) (43 Y DRIVE ASSY)

V: 50V/div. H: 500nsec/div.

CH1

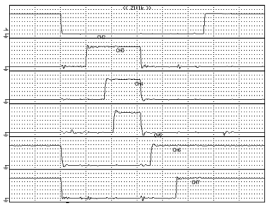


⑤ Control Signal (Sustain Waveform Gen.)

CH2: K2016 (YSUS-G) - K2010 (DGND)
CH3: K2025 (YSUS-U1) - K2010 (DGND)
CH4: K2022 (YSUS-U2) - K2010 (DGND)
CH5: K2026 (YSUS-B) - K2010 (DGND)
CH6: K2024 (YSUS-D2) - K2010 (DGND)
CH7: K2027 (YSUS-D1) - K2010 (DGND) (43 Y DRIVE ASSY)

V: 1V/div. H: 500nsec/div.

CH2
CH3
CH4
CH5
CH6
CH7

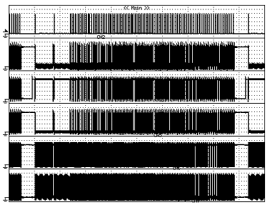


⑥ Scan Control Signal (1 field, color-bar)

CH2: K2006 (SI) - K2029 (DGND)
CH3: K2009 (OC1) - K2029 (DGND)
CH4: K2004 (OC2) - K2029 (DGND)
CH5: K2007 (CLR) - K2029 (DGND)
CH6: K2003 (CLK2) - K2029 (DGND)
CH7: K2008 (LE) - K2029 (DGND) (43 Y DRIVE ASSY)

V: 1V/div. H: 2msec/div.

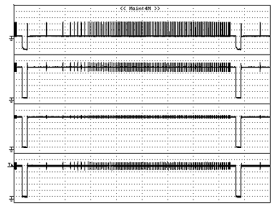
CH2
CH3
CH4
CH5
CH6
CH7



⑦ X Drive Pulse Control Signal (color-bar)

CH1: R1226 (XPSUS) - K2301 (SUSGND)
V: 100V/div. H: 2msec/div.
CH2: K1016 (XCP-MSK) - K1020 (DGND)
CH3: K1015 (XSUS-MSK) - K1020 (DGND)
CH4: K1014 (XNR-D) - K1020 (DGND)
V: 1V/div. H: 2msec/div.
(43 X DRIVE ASSY)

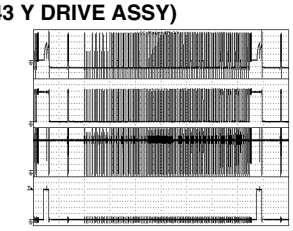
CH1
CH2
CH3
CH4



⑧ Y Drive Pulse Control Signal (color-bar)

CH1: R2348 (YPSUS) - K2301 (SUSGND)
V: 50V/div. H: 2msec/div.
CH2: K2015 (YSUS-MSK) - K2010 (DGND)
CH3: K2017 (YSOFT-D) - K2010 (DGND)
CH4: K2023 (YPR-U) - K2010 (DGND)
V: 1V/div. H: 2msec/div.
(43 Y DRIVE ASSY)

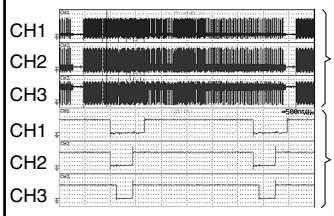
CH1
CH2
CH3
CH4



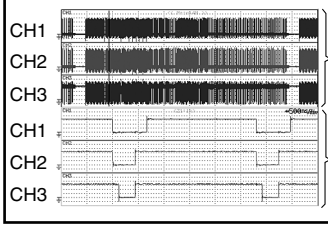
43 ADDRESS ASSY

• ADR RESONANCE BLOCK (VIDEO)

① CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1603-pin 4 (ADR_U1)
CH3: IC1603-pin 2 (ADR_D1)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)

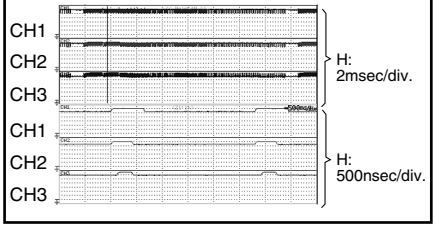


② CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1602-pin 4 (ADR_U2)
CH3: IC1602-pin 2 (ADR_D2)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)

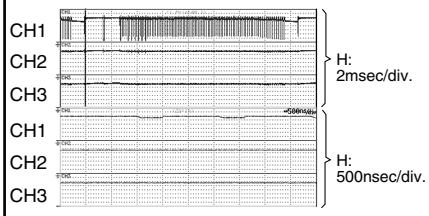


③ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1603-pin 4 (ADR_U1)
CH3: Q1603-pin 2 (ADR_D1)
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)

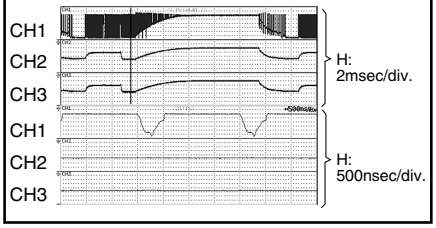
④ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1602-pin 4 (ADR_U2)
CH3: Q1602-pin 2 (ADR_D2)
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)



⑤ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)



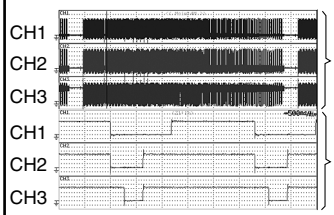
⑥ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: VIDEO, Signal: B/W(1×8))



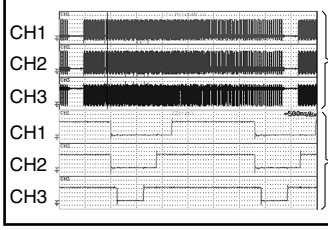
43 ADDRESS ASSY

• ADR RESONANCE BLOCK (PC)

① CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1603-pin 4 (ADR_U1)
CH3: IC1603-pin 2 (ADR_D1)
V: 1V/div.
(Input: PC, Signal: Color-bar)



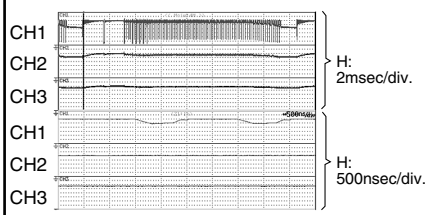
② CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1602-pin 4 (ADR_U2)
CH3: IC1602-pin 2 (ADR_D2)
V: 1V/div.
(Input: PC, Signal: Color-bar)



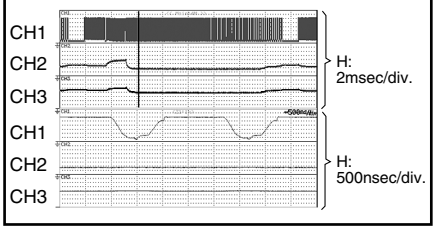
③ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1603-pin 4 (ADR_U1)
CH3: Q1603-pin 2 (ADR_D1)
V: 10V/div.
(Input: PC, Signal: Color-bar)

④ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1602-pin 4 (ADR_U2)
CH3: Q1602-pin 2 (ADR_D2)
V: 10V/div.
(Input: PC, Signal: Color-bar)

⑤ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: PC, Signal: Color-bar)



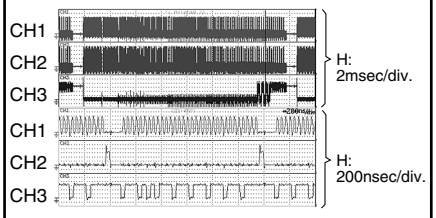
⑥ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: PC, Signal: B/W(1×8))



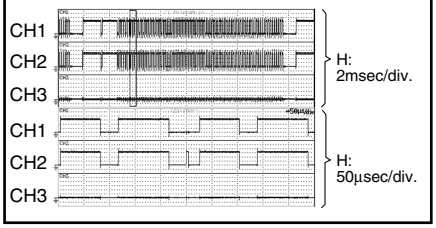
43 ADDRESS ASSY

• ADR LOGIC BLOCK

① CH1: IC1552-pin 18 (CLK input)
CH2: IC1552-pin 16 (LE input)
CH3: IC1552-pin 9 (DATA input)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



② CH1: IC1552-pin 23 (HBLK input)
CH2: IC1552-pin 19 (LBLK input)
CH3: IC1552-pin 25 (HZ input)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



3.3 VOLTAGES

• Voltages

CN5601 (D1)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	+12V	I	+12V power input	+12VDC
2	+12V	I	+12V power input	+12VDC
3	GND_D	–	GND	
4	GND_D	–	GND	
5	PD	O	Power down signal	0VDC
6	VSUS_ADJ	O	VSUS adjustment signal	
7	PS_PD	I	Power-down detecting signal of POWER SUPPLY block	0VDC
8	RELAY	O	Relay control signal	+3.3VDC
9	DRF	O	Drive control signal	0VDC
10	AC_DET	I	Primary side power (AC) state output at panel side	+3.0VDC
11	PD_TRIGGER	I	Power down trigger	+3.3VDC

CN5602 (D2)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	VADR	I	Address drive power (+61V) input	+61VDC
2	VADR	I	Address drive power (+61V) input	+61VDC
3	N.C		Not connected	
4	GND_ADR	–	GND	
5	GND_ADR	–	GND	
6	+6.5V	I	+6.5V power input	+6.8VDC
7	GND_D	–	GND	

RGB ASSY — POWER SUPPLY ASSY

R1 (CN7404)		Voltage (V)	P8	
No.	Name		Name	No.
1	V+16.5V	16.7	V+16.5V	1
2	GND	0	GND	2
3	V+12V	12.9	V+12V	3
4	V+12V	12.9	V+12V	4
5	GND	0	GND	5
6	GND	0	GND	6
7	V+6.5V	6.8	V+6.5V	7
8	V+6.5V	6.8	V+6.5V	8
9	GND	0	GND	9
10	GND	0	GND	10
11	V+3V_STB	3.3	V+3V_STB	11
12	GND	0	GND	12
13	AC_DET	3.3	AC_DET	13

RGB ASSY — AV I/O ASSY

R2 (CN6401)		Voltage (V)	AV4 (CN8705)	
No.	Name		Name	No.
1	VD_SLOT	0	VD_SLOT	1
2	HD_SLOT	0	HD_SLOT	2
3	GNDD	0	GNDD	3
4	B_SLOT	0	B_SLOT	4
5	GNDD	0	GNDD	5
6	G_SLOT	0	G_SLOT	6
7	GNDD	0	GNDD	7
8	R_ SLOT	0	R_ SLOT	8
9	VD_ IO	5	VD_ IO	9
10	HD_ IO	4.5	HD_ IO	10
	R13 (CN6402)			
1	GNDD	0	GNDD	11
2	B_ IO	0	B_ IO	12
3	GNDD	0	GNDD	13
4	G_ IO	0	G_ IO	14
5	GNDD	0	GNDD	15
6	R_ IO	0	R_ IO	16

RGB ASSY — COMM SLOT I/F ASSY

R3 (CN7406)		Voltage (V)	CS2 (CN8902)	
No.	Name		Name	No.
1	V+5V_STB	5.1	V+5V_STB	1
2	GND	0	GND	2
3	V+3V_STB	3.3	V+3V_STB	3
4	CYOBI1	3.3	CYOBI1	4
5	CYOBI2	0	CYOBI2	5
6	CYOBI3	0	CYOBI3	6
7	GND	0	GND	7
8	SR_OUT	4.9	SR_OUT	8
9	SLOT_ST_COM	3.3	SLOT_ST_COM	9
10	V+6V	6.8	V+6V	10
11	NC	0	NC	11

RGB ASSY — VIDEO SLOT I/F ASSY

R4 (CN7407)		Voltage (V)	VS1 (CN8951)	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	V+13V	13.6	V+13V	3
4	V+13V	13.6	V+13V	4
5	V+12V	12.9	V+12V	5
6	V+12V	12.9	V+12V	6
7	GND	0	GND	7
8	V+3V_STB	3.3	V+3V_STB	8
9	GND	0	GND	9
10	V+3V_DD	3.3	V+3V_DD	10
11	V+3V_DD	3.3	V+3V_DD	11
12	GND	0	GND	12

RGB ASSY — DIGITAL VIDEO ASSY

R5 (CN7408)		Voltage (V)	D3 (CN5002)	
No.	Name		Name	No.
1	V+1V_DD	1.4	V+1V_DD	1
2	V+1V_DD	1.4	V+1V_DD	2
3	V+1V_DD	1.4	V+1V_DD	3
4	GND	0	GND	4
5	GND	0	GND	5
6	GND	0	GND	6
7	V+3V_DD	3.3	V+3V_DD	7
8	V+3V_DD	3.3	V+3V_DD	8
9	GND	0	GND	9
10	GND	0	GND	10
11	NC			
12	NC			

RGB ASSY — LED OPT ASSY (OPT)

R7 (CN7205)		Voltage (V)	LO2 (CN9051)	
No.	Name		Name	No.
1	3.3V	3.3	3.3V	1
2	RLS	0-3.3	RLS	2
3	GND	0	GND	3
4	GND	0	GND	4

RGB ASSY — FAN (L), (R)

R8 (CN7402)		Voltage (V)	FAN (L)	
No.	Name		Name	No.
1	FAN_12V	0	FAN_12V	1
2	FAN_NG	3.2	FAN_NG	2
3	GND	0	GND	3
			FAN (R)	
4	FAN_12V	0	FAN_12V	1
5	FAN_NG	3.2	FAN_NG	2
6	GND	0	GND	3
7	NC			

RGB ASSY

R9 (CN5701)				
No.	Name			
AV I/O IF ASSY		AV I/O ASSY		
CN2102, AV6 (CN2101)		Voltage (V)	CN8705	
No.	Name		Name	No.
1	N.C.	0	N.C.	101
2	N.C.	0	N.C.	102
3	A_R_SLOT	0	A_R_SLOT	103
4	GND	0	GND	104
5	A_L_SLOT	0	A_L_SLOT	105
6	GND	0	GND	106
7	V+12V	12.9	V+12V	107
8	GND	0	GND	108
9	1N1_HD	4.4	1N1_HD	109
10	1N1_VD	4.8	1N1_VD	110
11	WE_ROM_B	0	WE_ROM_B	111
12	KEY	3.3	KEY	112
13	IO_YOBI2	0	IO_YOBI2	113
14	SR_OUT	5	SR_OUT	114
15	RXD_IF	3.3	RXD_IF	115
16	CLK_IF	3.3	CLK_IF	116
17	RXD_WR	3.3	RXD_WR	117
18	REQ_IF	0	REQ_IF	118
19	RST_IF	0	RST_IF	119
20	IF_CE	3.2	IF_CE	120
21	HOT_P1	0	HOT_P1	121
22	HDMI2_SDA	0	HDMI2_SDA	122
23	HDMI_INT1	3.2	HDMI_INT1	123
24	SCL_AV	3.3	SCL_AV	124
25	HDMI_AUDIO_CLK	0	HDMI_AUDIO_CLK	125
26	D_AUDIO_SEL	0	D_AUDIO_SEL	126
27	CEC2	0	CEC2	127
28	GND	0	GND	128
29	HD_DVI	0	HD_DVI	129
30	DE_DVI	0	DE_DVI	130
31	GND	0	GND	131
32	RB_DVI7	0/3.3	RB_DVI7	132
33	RB_DVI6	0/3.3	RB_DVI6	133
34	RB_DVI4	0/3.3	RB_DVI4	134
35	RB_DVI2	0/3.3	RB_DVI2	135
36	RB_DVI0	0/3.3	RB_DVI0	136
37	GB_DVI6	0/3.3	GB_DVI6	137
38	GB_DVI4	0/3.3	GB_DVI4	138
39	GB_DVI2	0/3.3	GB_DVI2	139
40	GB_DVI0	0/3.3	GB_DVI0	140
41	BB_DVI6	0/3.3	BB_DVI6	141
42	BB_DVI4	0/3.3	BB_DVI4	142
43	BB_DVI2	0/3.3	BB_DVI2	143
44	BB_DVI0	0/3.3	BB_DVI0	144
45	RA_DVI7	0/3.3	RA_DVI7	145
46	RA_DVI5	0/3.3	RA_DVI5	146
47	RA_DVI3	0/3.3	RA_DVI3	147
48	RA_DVI1	0/3.3	RA_DVI1	148
49	GND	0	GND	149
52	GA_DVI7	0/3.3	GA_DVI7	152
53	GA_DVI5	0/3.3	GA_DVI5	153
54	GA_DVI3	0/3.3	GA_DVI3	154
55	GA_DVI1	0/3.3	GA_DVI1	155
56	BA_DVI7	0/3.3	BA_DVI7	156

RGB ASSY

R9 (CN5701)				
No.	Name			
AV I/O IF ASSY			AV I/O ASSY	
CN2102, AV6 (CN2101)		Voltage (V)	CN8705	
No.	Name		Name	No.
57	BA_DVI5	0/3.3	BA_DVI5	157
58	BA_DVI3	0/3.3	BA_DVI3	158
59	GND	0	GND	159
60	V+5V_A2	5	V+5V_A2	160
61	N.C.	0	N.C.	161
62	N.C.	0	N.C.	162
101	N.C.	0	N.C.	1
102	N.C.	0	N.C.	2
103	A_MUTE	0	A_MUTE	3
104	TEMP3	0Å`3.3	TEMP3	4
105	V+6V	6.8	V+6V	5
106	GND	0	GND	6
107	V+3V_A1	3.3	V+3V_A1	7
108	GND	0	GND	8
109	V+3V_UCOM	3.3	V+3V_UCOM	9
110	GND	0	GND	10
111	V+3VSTB	3.3	V+3VSTB	11
112	IO_YOBI1	0	IO_YOBI1	12
113	PN2	0	PN2	13
114	ACTIVE	3.2	ACTIVE	14
115	TXD_IF	3.3	TXD_IF	15
116	TXD_WR	3.3	TXD_WR	16
117	AC_DET	3	AC_DET	17
118	IF_BUSY	0	IF_BUSY	18
119	RESET	3.3	RESET	19
120	HDMI_AUDIO_CE	0	HDMI_AUDIO_CE	20
121	HOT_P2	0	HOT_P2	21
122	HDMI2_SCL	0	HDMI2_SCL	22
123	SDA_AV	3.2	SDA_AV	23
124	HDMI_INT2	3.2	HDMI_INT2	24
125	HDMI_AUDIO_TXD	0	HDMI_AUDIO_TXD	25
126	CEC1	2	CEC1	26
127	RESETX1	3.3	RESETX1	27
128	VD_DVI	0	VD_DVI	28
129	GND	0	GND	29
130	CLK_DVI	0	CLK_DVI	30
131	GND	0	GND	31
132	GND	0	GND	32
133	RB_DVI5	0/3.3	RB_DVI5	33
134	RB_DVI3	0/3.3	RB_DVI3	34
135	RB_DVI1	0/3.3	RB_DVI1	35
136	GB_DVI7	0/3.3	GB_DVI7	36
137	GB_DVI5	0/3.3	GB_DVI5	37
138	GB_DVI3	0/3.3	GB_DVI3	38
139	GB_DVI1	0/3.3	GB_DVI1	39
140	GND	0	GND	40
141	BB_DVI6	0/3.3	BB_DVI6	41
142	BB_DVI4	0/3.3	BB_DVI4	42
143	BB_DVI2	0/3.3	BB_DVI2	43
144	BB_DVI0	0/3.3	BB_DVI0	44
145	RA_DVI6	0/3.3	RA_DVI6	45
146	RA_DVI4	0/3.3	RA_DVI4	46
147	RA_DVI2	0/3.3	RA_DVI2	47
148	RA_DVI0	0/3.3	RA_DVI0	48

RGB ASSY

R9 (CN5701)				
No.	Name			
AV I/O IF ASSY			AV I/O ASSY	
CN2102, AV6 (CN2101)		Voltage (V)	CN8705	
No.	Name		Name	No.
149	GND	0	GND	49
152	GA_DVI6	0/3.3	GA_DVI6	52
153	GA_DVI4	0/3.3	GA_DVI4	53
154	GA_DVI2	0/3.3	GA_DVI2	54
155	GA_DVI0	0/3.3	GA_DVI0	55
156	BA_DVI6	0/3.3	BA_DVI6	56
157	BA_DVI4	0/3.3	BA_DVI4	57
158	BA_DVI2	0/3.3	BA_DVI2	58
159	BA_DVI1	0/3.3	BA_DVI1	59
160	BA_DVI0	0/3.3	BA_DVI0	60
161	NC	0	NC	61
162	NC	0	NC	62

RGB ASSY VIDEO SLOT I/F ASSY

R11 (CN7410)		Voltage (V)	VS3 (CN8955)	
No.	Name		Name	No.
1	GND	0	GND	1
2	KEY	3.3	KEY	2
3	EMGREQ1_V	0	EMGREQ1_V	3
4	EMGREQ2_V	0	EMGREQ2_V	4
5	IC1V_OE	3.3	IC1V_OE	5
6	RESETX1	3.3	RESETX1	6
7	GND	0	GND	7
8	SD_SEL	3.3	SD_SEL	8
9	FNC2	0	FNC2	9
10	FNC3	0	FNC3	10
11	SOUND1	3.3	SOUND1	11
12	GND	0	GND	12
13	DSUBR	3.77	DSUBR	13
14	GND	0	GND	14
15	DSUBG	0	DSUBG	15
16	GND	0	GND	16
17	DSUBB	3.8	DSUBB	17
18	GND	0	GND	18
19	GND	0	GND	19
20	IN5_HD	0	IN5_HD	20
21	GND	0	GND	21
22	SOUSA_X	3.3	SOUSA_X	22
23	VYOBI1	0	VYOBI1	23
24	VYOBI2	0	VYOBI2	24
25	DSUBSW_DET	0	DSUBSW_DET	25
26	GND	0	GND	26
27	GND	0	GND	27
28	GND	0	GND	28
29	EMGREQ1_S	0	EMGREQ1_S	29
30	EMGREQ2_S	0	EMGREQ2_S	30
31	IC1S_OE	0	IC1S_OE	31
32	SLOT_ST3	0.4	SLOT_ST3	32
33	M_CHOICE	0	M_CHOICE	33
34	SOUND2	0	SOUND2	34
35	GND	0	GND	35
36	GND	0	GND	36
37	DSUBH	4.5	DSUBH	37

RGB ASSY VIDEO SLOT I/F ASSY

R11 (CN7410)		Voltage (V)	VS3 (CN8955)	
No.	Name		Name	No.
38	GND	0	GND	38
39	GND	0	GND	39
40	DSUBV	5	DSUBV	40
41	GND	0	GND	41
42	GND	0	GND	42
43	IN5_VD	3.3	IN5_VD	43
44	GND	0	GND	44
45	GND	0	GND	45
46	HYOUJI_X	0	HYOUJI_X	46
47	VYOBI4	0	VYOBI4	47
48	VYOBI5	0	VYOBI5	48
49	VYOBI6	0	VYOBI6	49
50	WE_ROM_B	0	WE_ROM_B	50

RGB ASSY VIDEO SLOT I/F ASSY

R12 (CN7405)		Voltage (V)	VS4 (CN8953)	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	G_SLOT	0	G_SLOT	3
4	GND	0	GND	4
5	B_SLOT	0	B_SLOT	5
6	GND	0	GND	6
7	R_SLOT	0	R_SLOT	7
8	GND	0	GND	8
9	HD_SLOT	0	HD_SLOT	9
10	GND	0	GND	10
11	VD_SLOT	0	VD_SLOT	11
12	GND	0	GND	12
13	AUDIO_L_SLOT	6	AUDIO_L_SLOT	13
14	GND	0	GND	14
15	AUDIO_R_SLOT	6	AUDIO_R_SLOT	15
16	GND	0	GND	16
17	SLOT_ST1	0	SLOT_ST1	17
18	S_DIN_SEL	0	S_DIN_SEL	18
19	FNC_1	0	FNC_1	19
20	FNC_0	5	FNC_0	20
21	NC	0	NC	21
22	NC	0	NC	22
23	VD_DET	0	VD_DET	23
24	GND	0	GND	24
25	HD_DET	0	HD_DET	25
26	GND	0	GND	26
27	VD_IC1	3.2	VD_IC1	27
28	GND	0	GND	28
29	HD_IC1	3	HD_IC1	29
30	GND	0	GND	30
31	GND	0	GND	31
32	RB0_IC1	0/3.3	RB0_IC1	32
33	RB1_IC1	0/3.3	RB1_IC1	33
34	RB2_IC1	0/3.3	RB2_IC1	34
35	RB3_IC1	0/3.3	RB3_IC1	35
36	RB4_IC1	0/3.3	RB4_IC1	36
37	RB5_IC1	0/3.3	RB5_IC1	37

RGB ASSY — VIDEO SLOT I/F ASSY

R12 (CN7405)		Voltage (V)	VS4 (CN8953)	
No.	Name		Name	No.
38	RB6_IC1	0/3.3	RB6_IC1	38
39	RB7_IC1	0/3.3	RB7_IC1	39
40	GND	0	GND	40
41	GND	0	GND	41
42	GB0_IC1	0/3.3	GB0_IC1	42
43	GB1_IC1	0/3.3	GB1_IC1	43
44	GB2_IC1	0/3.3	GB2_IC1	44
45	GB3_IC1	0/3.3	GB3_IC1	45
46	GB4_IC1	0/3.3	GB4_IC1	46
47	GB5_IC1	0/3.3	GB5_IC1	47
48	GB6_IC1	0/3.3	GB6_IC1	48
49	GB7_IC1	0/3.3	GB7_IC1	49
50	GND	0	GND	50
51	GND	0	GND	51
52	BB0_IC1	0/3.3	BB0_IC1	52
53	BB1_IC1	0/3.3	BB1_IC1	53
54	BB2_IC1	0/3.3	BB2_IC1	54
55	BB3_IC1	0/3.3	BB3_IC1	55
56	BB4_IC1	0/3.3	BB4_IC1	56
57	BB5_IC1	0/3.3	BB5_IC1	57
58	BB6_IC1	0/3.3	BB6_IC1	58
59	BB7_IC1	0/3.3	BB7_IC1	59
60	GND	0	GND	60
61	GND	0	GND	61
62	GND	0	GND	62
63	SCL_VS	3.1	SCL_VS	63
64	GND	0	GND	64
65	SDA_VS	3.1	SDA_VS	65
66	GND	0	GND	66
67	GND	0	GND	67
68	GND	0	GND	68
69	NC	0	NC	69
70	GND	0	GND	70
71	NC	0	NC	71
72	GND	0	GND	72
73	NC	0	NC	73
74	GND	0	GND	74
75	NC	0	NC	75
76	NC	0	NC	76
77	IN4_DET	0	IN4_DET	77
78	IN3_DET	0	IN3_DET	78
79	SLOT_ST2	3	SLOT_ST2	79
80	SR_VS	5.1	SR_VS	80
81	NC	0	NC	81
82	3G4G	3.3	3G4G	82
83	GND	0	GND	83
84	GND	0	GND	84
85	IN5_DET	0	IN5_DET	85
86	GND	0	GND	86
87	DE_IC1	2.5	DE_IC1	87
88	GND	0	GND	88
89	CK_IC1	1.5	CK_IC1	89
90	GND	0	GND	90
91	GND	0	GND	91
92	BA7_IC1	0/3.3	BA7_IC1	92
93	BA6_IC1	0/3.3	BA6_IC1	93
94	BA5_IC1	0/3.3	BA5_IC1	94

RGB ASSY — VIDEO SLOT I/F ASSY

R12 (CN7405)		Voltage (V)	VS4 (CN8953)	
No.	Name		Name	No.
95	BA4_IC1	0/3.3	BA4_IC1	95
96	BA3_IC1	0/3.3	BA3_IC1	96
97	BA2_IC1	0/3.3	BA2_IC1	97
98	BA1_IC1	0/3.3	BA1_IC1	98
99	BA0_IC1	0/3.3	BA0_IC1	99
100	GND	0	GND	100
101	GND	0	GND	101
102	GA7_IC1	0/3.3	GA7_IC1	102
103	GA6_IC1	0/3.3	GA6_IC1	103
104	GA5_IC1	0/3.3	GA5_IC1	104
105	GA4_IC1	0/3.3	GA4_IC1	105
106	GA3_IC1	0/3.3	GA3_IC1	106
107	GA2_IC1	0/3.3	GA2_IC1	107
108	GA1_IC1	0/3.3	GA1_IC1	108
109	GA0_IC1	0/3.3	GA0_IC1	109
110	GND	0	GND	110
111	GND	0	GND	111
112	RA7_IC1	0/3.3	RA7_IC1	112
113	RA6_IC1	0/3.3	RA6_IC1	113
114	RA5_IC1	0/3.3	RA5_IC1	114
115	RA4_IC1	0/3.3	RA4_IC1	115
116	RA3_IC1	0/3.3	RA3_IC1	116
117	RA2_IC1	0/3.3	RA2_IC1	117
118	RA1_IC1	0/3.3	RA1_IC1	118
119	RA0_IC1	0/3.3	RA0_IC1	119
120	GND	0	GND	120
121	GND	0	GND	121
122	GND	0	GND	122

AV I/O ASSY — AUDIO AMP ASSY

AV1 (CN7601)		Voltage (V)	AP2 (CN5001)	
No.	Name		Name	No.
1	A_NG	3.2	A_NG	15
2	TEMP3	0-3.3	TEMP3	14
3	A_MUTE	0	A_MUTE	13
4	ST_BY	2.5	ST_BY	12
5	GND	0	GND	11
6	V+6V	6.8	V+6V	10
7	V+3V	3.3	V+3V	9
8	V+12A	12	V+12A	8
9	GND	0	GND	7
10	-R_OUT	6	-R_OUT	6
11	+R_OUT	6	+R_OUT	5
12	GND	0	GND	4
13	-L_OUT	6	-L_OUT	3
14	+L_OUT	6	+L_OUT	2
15	GND	0	GND	1

AV I/O ASSY — KEY CONTROL ASSY

AV2 (CN8702)		Voltage (V)	KY1 (CN9001)	
No.	Name		Name	No.
1	GND	0	GND	1
2	KEY	3.3	KEY	2
3	V+3VSTB	3.3	V+3VSTB	3

AV I/O ASSY — LED OPT ASSY

AV3 (CN8703)		Voltage (V)	KY1 (CN9651)	
No.	Name		Name	No.
1	V+3STB	3.3	V+3STB	1
2	LED_ G	0	LED_ G	2
3	LED_ R	3.3	LED_ R	3
4	GND	0	GND	4
5	AC_ DET	3	AC_ DET	5

AV I/O ASSY — COMM SLOT I/F ASSY

AV5 (CN8704)		Voltage (V)	KY1 (CN8905)	
No.	Name		Name	No.
1	STL_LINK	3.3	STL_LINK	1
2	CB_MUTE	3.3	CB_MUTE	2
3	KEY	3.3	KEY	3
4	RXD	3.3	RXD	4
5	TXD	3.3	TXD	5
6	GND	0	GND	6

AUDIO AMP ASSY — POWER SUPPLY ASSY

AP1 (CN5002)		Voltage (V)	P6	
No.	Name		Name	No.
1	V+16R5	16.7	V+16R5	1
2	V+16R5	16.7	V+16R5	2
3	GNDP	0	GNDP	3
4	GNDP	0	GNDP	4
5	GNDP	0	GNDP	5
6	GNDP	0	GNDP	6

AUDIO AMP ASSY — SP TERMINAL R ASSY

AP3 (CN5003)		Voltage (V)	SP2 (CN9801)	
No.	Name		Name	No.
1	GND	0	GND	1
2	R+	5.3	R+	2
3	R-	5.2	R-	3
			SP TERMINAL L ASSY	
			SP1 (CN9702)	
4	STBGND	0	STBGND	1
5	TEMP3	0-3.3	TEMP3	2
6	V+3VDD	3.3	V+3VDD	3
7	GND	0	GND	4
8	L+	5.3	L+	5
9	L-	5.2	L-	6

KEY CONTROL ASSY — SIDE KEY ASSY

KY2 (CN9002)		Voltage (V)	KY3 (CN4801)	
No.	Name		Name	No.
1	D7	0/3.3	D7	1
2	D6	0/3.3	D6	2
3	D5	0/3.3	D5	3
4	G0	0/3.3	G0	4
5	G1	0/3.3	G1	5
6	G2	0/3.3	G2	6
7	G3	0/3.3	G3	7
8	GND	0	GND	8

COMM SLOT I/F ASSY — IR ASSY

CS4 (CN8901)		Voltage (V)	RE1 (CN4901)	
No.	Name		Name	No.
1	V+3STB	3.3	V+3STB	1
2	GND	0	GND	2
3	SR	0	SR	3
4	GND	0	GND	4

COMM SLOT I/F ASSY — COMM SLOT ASSY

CS5 (CN8904)		Voltage (V)	CN9454	
No.	Name		Name	No.
1	NC	0	NC	1
2	IRSW	0	IRSW	2
3	IR_COMM_OUT	5.1	IR_COMM_OUT	3
4	IR_COMM_IN	5.1	IR_COMM_IN	4
5	GND	0	GND	5
6	GND	0	GND	6
7	GND	0	GND	7
8	CYOBI3	0	CYOBI3	8
9	CYOBI2	0	CYOBI2	9
10	CSL_ST2	3.3	CSL_ST2	10
11	CSL_ST1	3.3	CSL_ST1	11
12				12
13				13
14	GND	0	GND	14
15	GND	0	GND	15
16	FIRST_RXD	3.3	FIRST_RXD	16
17	GET_UART	3.3	GET_UART	17
18	INT_EXT	3.3	INT_EXT	18
19	RXD_CARD	0	RXD_CARD	19
20	TXD_CARD	0	TXD_CARD	20
21	GPC5	0	GPC5	21
22	GPC4	0	GPC4	22
23	GPC3	0	GPC3	23
24	GPC2	0	GPC2	24
25	GPC1	0	GPC1	25
101	NC	0	NC	101
102	GND	0	GND	102
103	GND	0	GND	103
104	GND	0	GND	104
105	TXD_PDP	3.3	TXD_PDP	105
106	RXD_PDP	3.3	RXD_PDP	106
107	KEY_COMM_IN	3.3	KEY_COMM_IN	107
108	CB_MUTE	3.3	CB_MUTE	108
109	STL_LINK	3.3	STL_LINK	109
110	GND	0	GND	110
111	GND	0	GND	111
114	V+6.5V	6.8	V+6.5V	114
115	V+6.5V	6.8	V+6.5V	115
116	GND	0	GND	116
117	GND	0	GND	117
118	V+3VSTB	3.3	V+3VSTB	118
119	V+3VSTB	3.3	V+3VSTB	119
120	NC	0	NC	120
121	NC	0	NC	121
122	NC	0	NC	122
123	NC	0	NC	123
124	NC	0	NC	124
125	NC	0	NC	125

COMM SLOT I/F ASSY

CS3 (CN8903)		Voltage (V)	VS2 (CN8952)	
No.	Name		Name	No.
1	GND	0	GND	1
2	FIRST_RXD	3.3	FIRST_RXD	2
3	GET_UART	3.3	GET_UART	3
4	INT_EXT	3.3	INT_EXT	4
5	RXD_GU	0	RXD_GU	5
6	TXD_GU	0	TXD_GU	6
7	GPC5	0	GPC5	7
8	GPC4	0	GPC4	8
9	GPC3	0	GPC3	9
10	GPC2	0	GPC2	10
11	GPC1	0	GPC1	11

VIDEO SLOT I/F ASSY VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	G_SLOT	0	G_SLOT	3
4	GND	0	GND	4
5	B_SLOT	0	B_SLOT	5
6	GND	0	GND	6
7	R_SLOT	0	R_SLOT	7
8	GND	0	GND	8
9	HD_SLOT	0	HD_SLOT	9
10	GND	0	GND	10
11	VD_SLOT	0	VD_SLOT	11
12	GND	0	GND	12
13	AUDIO_L_SLOT	6	AUDIO_L_SLOT	13
14	GND	0	GND	14
15	AUDIO_R_SLOT	6	AUDIO_R_SLOT	15
16	GND	0	GND	16
17	SLOT_ST1	0	SLOT_ST1	17
18	S_DIN_SEL	0	S_DIN_SEL	18
19	FNC_1	0	FNC_1	19
20	FNC_0	5	FNC_0	20
21	V+3.3V	3.2	V+3.3V	21
22	V+3.3V	3.2	V+3.3V	22
23	VD_DET	0	VD_DET	23
24	GND	0	GND	24
25	HD_DET	0	HD_DET	25
26	GND	0	GND	26
27	VD	3.2	VD	27
28	GND	0	GND	28
29	HD	3	HD	29
30	GND	0	GND	30
31	GND	0	GND	31
32	RB0_IC1	0/3.3	RB0_IC1	32
33	RB1_IC1	0/3.3	RB1_IC1	33
34	RB2_IC1	0/3.3	RB2_IC1	34
35	RB3_IC1	0/3.3	RB3_IC1	35
36	RB4_IC1	0/3.3	RB4_IC1	36
37	RB5_IC1	0/3.3	RB5_IC1	37
38	RB6_IC1	0/3.3	RB6_IC1	38
39	RB7_IC1	0/3.3	RB7_IC1	39
40	GND	0	GND	40
41	GND	0	GND	41
42	GB0_IC1	0/3.3	GB0_IC1	42

VIDEO SLOT I/F ASSY VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
43	GB1_IC1	0/3.3	GB1_IC1	43
44	GB2_IC1	0/3.3	GB2_IC1	44
45	GB3_IC1	0/3.3	GB3_IC1	45
46	GB4_IC1	0/3.3	GB4_IC1	46
47	GB5_IC1	0/3.3	GB5_IC1	47
48	GB6_IC1	0/3.3	GB6_IC1	48
49	GB7_IC1	0/3.3	GB7_IC1	49
50				50
51				51
52	GND	0	GND	52
53	GND	0	GND	53
54	BB0_IC1	0/3.3	BB0_IC1	54
55	BB1_IC1	0/3.3	BB1_IC1	55
56	BB2_IC1	0/3.3	BB2_IC1	56
57	BB3_IC1	0/3.3	BB3_IC1	57
58	BB4_IC1	0/3.3	BB4_IC1	58
59	BB5_IC1	0/3.3	BB5_IC1	59
60	BB6_IC1	0/3.3	BB6_IC1	60
61	BB7_IC1	0/3.3	BB7_IC1	61
62	GND	0	GND	62
63				63
64				64
65	GND	0	GND	65
66	GND	0	GND	66
67	KEY	3.3	KEY	67
68	NC	0	NC	68
69	TXD_CARD	0	TXD_CARD	69
70	RXD_CARD	0	RXD_CARD	70
71	INT_EXT	3.3	INT_EXT	71
72	NC	0	NC	72
73	EMGREQ1_V	0	EMGREQ1_V	73
74	EMGREQ2_V	0	EMGREQ2_V	74
75	IC1V_OE	3.3	IC1V_OE	75
76	RESETX1	3.3	RESETX1	76
77	NC	0	NC	77
78	SD_SEL	3.3	SD_SEL	78
79	FNC2	0	FNC2	79
80	FNC3	0	FNC3	80
81	SOUND1	3.3	SOUND1	81
82	GND	0	GND	82
83	DSUBR	3.8	DSUBR	83
84	GND	0	GND	84
85	DSUBG	0	DSUBG	85
86	GND	0	GND	86
87	DSUBB	3.8	DSUBB	87
88	GND	0	GND	88
89	IN5_HD	0	IN5_HD	89
90	SOUSA_X	3.3	SOUSA_X	90
91	GPC1	0	GPC1	91
92	GPC2	0	GPC2	92
93	GPC5	0	GPC5	93
94	VYOBI1	0	VYOBI1	94
95	VYOBI2	0	VYOBI2	95
96	DSUBSW_DET	0	DSUBSW_DET	96
101	GND	0	GND	101
102	GND	0	GND	102
103	GND	0	GND	103

VIDEO SLOT I/F ASSY — VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
104	SCL_VS	3.1	SCL_VS	104
105	GND	0	GND	105
106	SDA_VS	3.1	SDA_VS	106
107	GND	0	GND	107
108	GND	0	GND	108
109	GND	0	GND	109
110	V+12V	12.9	V+12V	110
111	GND	0	GND	111
112	NC	0	NC	112
113	GND	0	GND	113
114	V+3.3STB	3.3	V+3.3STB	114
115	V+13.5	13.6	V+13.5	115
116	V+13.5	13.6	V+13.5	116
117	IN4_DET	0	IN4_DET	117
118	IN3_DET	0	IN3_DET	118
119	SLOT_ST2	3	SLOT_ST2	119
120	IR	5.1	IR	120
121	NC	0	NC	121
122	NC	0	NC	122
123	GND	0	GND	123
124	GND	0	GND	124
125	3G4G	3.3	3G4G	125
126	IN5_DET	0	IN5_DET	126
127	GND	0	GND	127
128	DE	2.5	DE	128
129	GND	0	GND	129
130	CLK	1.5	CLK	130
131	GND	0	GND	131
132	BA7_IC1	0/3.3	BA7_IC1	132
133	BA6_IC1	0/3.3	BA6_IC1	133
134	BA5_IC1	0/3.3	BA5_IC1	134
135	BA4_IC1	0/3.3	BA4_IC1	135
136	BA3_IC1	0/3.3	BA3_IC1	136
137	BA2_IC1	0/3.3	BA2_IC1	137
138	BA1_IC1	0/3.3	BA1_IC1	138
139	BA0_IC1	0/3.3	BA0_IC1	139
140	GND	0	GND	140
141	GND	0	GND	141
142	GA7_IC1	0/3.3	GA7_IC1	142
143	GA6_IC1	0/3.3	GA6_IC1	143
144	GA5_IC1	0/3.3	GA5_IC1	144
145	GA4_IC1	0/3.3	GA4_IC1	145
146	GA3_IC1	0/3.3	GA3_IC1	146
147	GA2_IC1	0/3.3	GA2_IC1	147
148	GA1_IC1	0/3.3	GA1_IC1	148
149	GA0_IC1	0/3.3	GA0_IC1	149
150				150
151				151
152	GND	0	GND	152
153	GND	0	GND	153
154	RA7_IC1	0/3.3	RA7_IC1	154
155	RA6_IC1	0/3.3	RA6_IC1	155
156	RA5_IC1	0/3.3	RA5_IC1	156
157	RA4_IC1	0/3.3	RA4_IC1	157
158	RA3_IC1	0/3.3	RA3_IC1	158
159	RA2_IC1	0/3.3	RA2_IC1	159
160	RA1_IC1	0/3.3	RA1_IC1	160

VIDEO SLOT I/F ASSY — VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
161	RA0_IC1	0/3.3	RA0_IC1	161
162	GND	0	GND	162
163				163
164				164
165	GND	0	GND	165
166	GND	0	GND	166
167	VSEPSCL	3.3	VSEPSCL	167
168	VSEPSDA	3.3	VSEPSDA	168
169	NC	0	NC	169
170	GET_UART	3.3	GET_UART	170
171	FIRST_RXD	3.3	FIRST_RXD	171
172	NC	0	NC	172
173	EMGREQ1_S	0	EMGREQ1_S	173
174	EMGREQ2_S	0	EMGREQ2_S	174
175	IC1S_OE	0	IC1S_OE	175
176	NC	0	NC	176
177	NC	0	NC	177
178	NC	0	NC	178
179	SLOT_ST3	0.4	SLOT_ST3	179
180	M_CHOICE	0	M_CHOICE	180
181	SOUND2	0	SOUND2	181
182	GND	0	GND	182
183	GND	0	GND	183
184	DSUBH	4.5	DSUBH	184
185	GND	0	GND	185
186	DSUBV	4.95	DSUBV	186
187	GND	0	GND	187
188	GND	0	GND	188
189	IN5_VD	3.3	IN5_VD	189
190	HYOUJI_X	0	HYOUJI_X	190
191	GPC3	0	GPC3	191
192	GPC4	0	GPC4	192
193	NC	0	NC	193
194	VYOBI4	0	VYOBI4	194
195	VYOBI5	0	VYOBI5	195
196	VYOBI6	0	VYOBI6	196

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→	*56 x 10^1*	→ *561*	*RD1/4PU 5 6 1 J*
47k Ω	→	*47 x 10^3*	→ *473*	*RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50*		*RN2H R 5 0 K*
1 Ω	→	*1R0*		*RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→	*562 x 10^1*	→ *5621*	*RN1/4PC 5 6 2 1 F*

Mark	No.	Description	Part No.

LIST OF ASSEMBLIES

NSP	1..43	ADDRESS ASSY	AWV2120
NSP	2..43	ADDRESS ASSY	AWZ6793
NSP	1..43	SCAN FUKUGO ASSY	AWV2023
NSP	2..43	SCAN A ASSY	AWZ6796
NSP	2..43	SCAN B ASSY	AWZ6797
NSP	2..	X CONNECTOR A ASSY	AWZ6798
NSP	2..	X CONNECTOR B ASSY	AWZ6799
NSP	1..43	X DRIVE ASSY	AWV2021
	2..43	X DRIVE ASSY	AWZ6840
	2..	PANEL SENSOR ASSY	AWZ6795
	1..43	Y DRIVE ASSY	AWV2022
NSP	1..	RGB ASSY	AWV2095
	2..	RGB ASSY	AWZ6960
	2..	SIDE KEY ASSY	AWZ6852
NSP	1..	CMX FUKUGO ASSY (PDP-434CMX type)	AWV2107
NSP	1..	CMX FUKUGO ASSY (PDP-43MXE1, PDP-43MXE1-S types)	AWV2108
	2..	AV I/O ASSY (PDP-434CMX type)	AWZ6894
	2..	AV I/O ASSY (PDP-43MXE1, PDP-43MXE1-S types)	AWZ6895
	2..	AUDIO AMP ASSY	AWZ6848
	2..	COMM SLOT ASSY	AWZ6849
	2..	COMM SLOT I/F ASSY	AWZ6850
	2..	VIDEO SLOT I/F ASSY (PDP-434CMX type)	AWZ6851
	2..	VIDEO SLOT I/F ASSY (PDP-43MXE1, PDP-43MXE1-S types)	AWZ6901
	2..	KEY CONTROL ASSY	AWZ6853
	2..	LED OPT ASSY	AWZ6957
	2..	IR RECIVE ASSY	AWZ6855
	2..	SP TERMINAL L ASSY	AWZ6856
	2..	SP TERMINAL R ASSY	AWZ6857
	2..	COVER ASSY	AWZ6858
	2..	AV I/O I/F ASSY	AWZ6859
	1..	DIGITAL VIDEO ASSY	AWV2100

CONTRAST OF PCB ASSEMBLIES

AV I/O ASSY

AWZ6894 and AWZ6895 are constructed the same except for the following :

Mark	No.	Description	AWZ6894	AWZ6895
		[AV I/O BLOCK]		
	R7773		RS1/16S0R0J	Not used
	R7774		Not used	RS1/16S0R0J

VIDEO SLOT I/F ASSY

AWZ6851 and AWZ6901 are constructed the same except for the following :

Mark	No.	Description	AWZ6851	AWZ6901
	R8881		RS1/16S0R0J	Not used
	R8882		Not used	RS1/16S0R0J

PCB PARTS LIST for PDP-434CMX/LUC

Mark	No.	Description	Part No.

43 ADDRESS ASSY

[ADR LOGIC BLOCK]

SEMICONDUCTORS

	IC1501	PEE001B

COILS AND FILTERS

	F1501-F1503	ATF1194

CAPACITORS

	C1556,C1559,C1560,C1563 (330p/100V)	ACG1105
	C1501,C1502(47/6.3V)	ACH1357
	C1503-C1507,C1555,C1558,C1561	CKSSYF104Z16
	C1564	CKSSYF104Z16

RESISTORS

	R1510,R1519,R1522	RAB4C470J
	R1505-R1509	RS1/16SS1000F
	Other Resistors	RS1/16S###J

OTHERS

	CN1501 40P FFC CONNECTOR	AKM1215

[ADR RESONANNCE BLOCK]

SEMICONDUCTORS

	IC1601-IC1603	TND304S
	Q1604	2SA1163
	Q1601	HAT1081R
	Q1602,Q1603	HAT3019R
	D1601	1SS302

Mark No.	Description	Part No.
	D1608,D1609,D1617,D1618	EC10UA20
	D1610,D1611,D1616,D1619,D1620	EC11FS2
A	D1604,D1612	MA126
	D1602,D1606,D1607,D1614,D1615	UDZS15B
	D1621,D1622	UDZS24B
	COILS AND FILTERS	
	L1601,L1602	ATH1135
	CAPACITORS	
	C1609,C1615 (0.47/100V)	ACE1172
	C1605,C1607,C1608,C1613,C1614 (0.01/100V)	ACG1101
	C1618 (47/6.3V)	ACH1357
B	C1603 (47/16V)	ACH1391
	C1601,C1602 (56/80V)	ACH1405
	C1604,C1606,C1612	CKSSYF104Z16
	RESISTORS	
	R1631 (10,1/2W)	ACN1174
	Other Resistors	RS1/16S###J

43 SCAN A ASSY

	SEMICONDUCTORS	
C	IC3001-IC3006	SN755864APZP
	D3001	KU10N16
	CAPACITORS	
	C3001,C3002,C3012,C3013	ACG1088
	C3023,C3024,C3034,C3035	ACG1088
	C3045,C3046,C3056,C3057 (0.1/250V)	ACG1088
	C3005,C3008,C3016,C3019,C3026	CCSRCH101J50
	C3029,C3037,C3040,C3048,C3051	CCSRCH101J50
	C3060,C3063	CCSRCH101J50
D	C3007,C3018,C3033,C3044,C3050	CCSRCH181J50
	C3062	CCSRCH181J50
	C3006,C3011,C3017,C3022	CCSRCH331J50
	C3031,C3032,C3042,C3043,C3049	CCSRCH331J50
	C3055,C3061,C3066	CCSRCH331J50
	C3009,C3010,C3020,C3021,C3028	CCSRCH390J50
	C3030,C3039,C3041,C3053,C3054	CCSRCH390J50
	C3064,C3065	CCSRCH390J50
	C3003,C3014,C3025,C3036,C3047	CKSRYB105K6R3
	C3058	CKSRYB105K6R3
E	**RESISTORS**	
	R3003,R3011,R3017,R3025,R3030	RAB4C221J
	R3036	RAB4C221J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN3001 15P CONNECTOR	AKP1218
	K3001,K3004,K3009,K3015,K3017	AKX9002
	K3019,K3021 TEST PIN	AKX9002

43 SCAN B ASSY

F	**SEMICONDUCTORS**	
	IC3201-IC3206	SN755864APZP
	D3201	KU10N16
	CAPACITORS	
	C3201,C3211,C3212,C3222,C3223	ACG1088
	C3233,C3234,C3244,C3245	ACG1088
	C3255,C3256,C3266 (0.1/250V)	ACG1088
	C3203,C3204,C3214,C3215,C3226	CCSRCH101J50
	C3228,C3237,C3239,C3247,C3251	CCSRCH101J50
	C3258,C3259	CCSRCH101J50
	C3206,C3217,C3232,C3243,C3249	CCSRCH181J50
	C3261	CCSRCH181J50
	C3205,C3210,C3216,C3221	CCSRCH331J50
	C3230,C3231,C3241,C3242,C3248	CCSRCH331J50
	C3254,C3260,C3265	CCSRCH331J50
	C3208,C3209,C3219,C3220,C3227	CCSRCH390J50
	C3229,C3238,C3240,C3252,C3253	CCSRCH390J50
	C3263,C3264	CCSRCH390J50
	C3202,C3213,C3224,C3235,C3246	CKSRYB105K6R3
	C3257	CKSRYB105K6R3
	RESISTORS	
	R3202,R3210,R3216,R3224,R3229	RAB4C221J
	R3235	RAB4C221J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN3201 15P CONNECTOR	AKP1218
	K3203,K3208,K3214,K3216,K3218	AKX9002
	K3220,K3221 TEST PIN	AKX9002

X CONNECTOR A ASSY

This assembly has no service part.

X CONNECTOR B ASSY

This assembly has no service part.

43 X DRIVE ASSY

	[X LOGIC BLOCK]	
	SEMICONDUCTORS	
	IC1002	TC74ACT540FT
	IC1001	TC74ACT541FT
	IC1003	TC74VHC08FT
	CAPACITORS	
	C1001	CEHAT470M25
	C1002-C1004	CKSRYB104K16
	RESISTORS	
	R1001,R1002,R1005	RAB4C470J
	R1003,R1004,R1007	RAB4C472J
	OTHERS	
	CN1001 30P FFC CONNECTOR	AKM1218
	[RESONANCE BLOCK]	
	SEMICONDUCTORS	
	IC1103	BA10393F
	IC1101,IC1102	TND506MD
	Q1113	2SC2412K

Mark No.	Description	Part No.
Q1102,Q1103,Q1111,Q1112,Q1114		2SK3560
Q1105,Q1106,Q1108,Q1109		2SK3723
Q1101,Q1104,Q1107,Q1110		CPH5506
D1109,D1122		1SS302
D1112,D1119		1SS355
D1101,D1102,D1104,D1105		EC11FS4
D1107,D1108,D1111,D1114-D1117		EC11FS4
D1120,D1121,D1127,D1128		EC11FS4
D1103,D1106,D1113,D1118		TCU20A30
D1124,D1125		TCU20A30
D1110,D1123		UDZS16B
COILS AND FILTERS		
L1104		ATH1119
L1102		ATH1133
L1103,L1105		ATH1134
L1101		LFEA470J
CAPACITORS		
C1113,C1114,C1126,C1127 (3.3/250V)		ACE1168
C1111,C1124 (100p/630V)		ACG1104
C1109,C1119 (0.1/630V)		ACG1108
C1101,C1105,C1116,C1117		CCSRCH331J50
C1128,C1130-C1132		CKSRYB104K16
C1102,C1118		CKSRYB105K6R3
C1104,C1108,C1115,C1122		CKSYB105K25
RESISTORS		
R1116,R1122		RS1/10S1003F
R1133,R1143-R1145		RS1/10S100J
R1103,R1106,R1118,R1119,R1153		RS1/10S2R2J
R1136		RS1/16S1202F
R1139		RS1/16S3301F
R1130		RS1/16S5601F
R1134		RS1/16S8201F
R1113,R1128		RS1MMF101J
VR1101-VR1104		CCP1390
Other Resistors		RS1/16S###J
[SUS BLOCK]		
SEMICONDUCTORS		
IC1202		HCPL-M611
IC1205		NJM2872F05
IC1203,IC1207		STK795-510
IC1208		TLP181(P-GR)
IC1204,IC1206		TND301S
Q1207		2SC2412K
Q1203		2SD1898
Q1302		2SJ522
Q1301		2SK2503
Q1205		2SK2908-01S
Q1206,Q1208		DTC124EK
Q1201		HN1B04FU
D1212		1SS302
D1211,D1213,D1216		1SS355
D1201,D1207		EC10QS04
D1204,D1301		EC11FS4
D1214		EC8FS6
D1208		UDZS5.6B
COILS AND FILTERS		
L1204,L1205		ATH1112

Mark No.	Description	Part No.
L1202		LFEA100J
L1203,L1206		LFEA470J
CAPACITORS		
C1214-C1217,C1227-C1230		ACE1163
C1233 (0.12/250V)		ACE1169
C1244 (0.1/250V)		ACE1170
C1209 (0.1/630V)		ACG1092
C1219,C1231		ACH1359
C1224		CEHAT101M16
C1301		CEHAT221M25
C1203,C1207,C1210,C1220,C1223		CEHAT470M25
C1238,C1239		CEHAT470M25
C1235		CKSRYB102K50
C1213,C1225,C1240,C1241,C1243		CKSRYB104K16
C1202,C1205,C1206,C1212,C1302		CKSRYF104Z50
RESISTORS		
R1230 (2.2/ 1/2W)		ACN1166
R1208 (10/ 1/2W)		ACN1174
R1304 (560/ 1/2W)		ACN1195
R1305 (1k/ 1/2W)		ACN1198
R1301,R1302,R1314		RS1/10S122J
R1226,R1251		RS1MMF361J
R1235,R1236		RS2MMF121J
Other Resistors		RS1/16S###J
OTHERS		
KN1201-KN1205,KN1208,KN1214		ANK-142
KN1210-KN1212 (GROUND PLATE)		ANK-142
CN1201 12P CONNECTOR		B12B-EH
[D-D CON BLOCK]		
SEMICONDUCTORS		
IC1404		AN1431M
IC1402		MIP161
IC1401,IC1403		TLP181(P-GR)
Q1401		2SA1037K
Q1402		2SC2412K
D1407,D1408		EC11FS2
D1404		EC8FS6
D1401,D1403		UDZS5.6B
COILS AND FILTERS		
L1401		ATH1110
T1401		ATK1153
CAPACITORS		
C1401,C1402 (22/315V)		ACH1361
C1404		CEHAT101M16
C1405		CEHAT101M25
C1409		CEHAT331M16
C1403,C1407,C1408,C1411		CKSRYB104K16
C1406		CKSRYF104Z50
RESISTORS		
R1405,R1406,R1408-R1410,R1414		RS1/10S3602F
R1420		RS1/16S1101F
R1403		RS1/16S2702F
R1401,R1404		RS1/16S4701F
R1417		RS1/16S7500F
VR1401 (1k)		CCP1390
Other Resistors		RS1/16S###J

Mark	No.	Description	Part No.
OTHERS			
	1002	CARD SPACER	AEC1957
	1001	DRIVE SIRICON SHEET A	AEH1062
	1001	PLATE X	ANG2622
	1001	DRIVE HEATSINK A	ANH1613
	1001	SCREW	BMZ30P080FZK
	1002	SCREW	PMB30P060FNI

PANEL SENSOR ASSY

SEMICONDUCTORS			
	IC1072		MM1522XU
	IC1071		MM3012XN
CAPACITORS			
	C1075		ACH1357
	C1074		CKSRYB103K50
	C1071,C1076		CKSRYB104K16
	C1072,C1073		CKSRYF105Z10
RESISTORS			
	R1076,R1078		RS1/16S1001F
	Other Resistors		RS1/16S###J

43 Y DRIVE ASSY

OTHERS			
	2002	CARD SPACER	AEC1957
	2001	DRIVE SIRICON SHEET A	AEH1062
	2001	PLATE Y	ANG2557
	2001	DRIVE HEATSINK A	ANH1613
	2001	SCREW	BMZ30P080FZK
	2002	SCREW	PMB30P060FNI
[Y LOGIC BLOCK]			
SEMICONDUCTORS			
	IC2002		TC74ACT540FT
	IC2001,IC2003		TC74ACT541FT
	IC2005		TC74VHC08FT
	IC2004		TC74VHC541FT
	Q2001		DTC124EK
CAPACITORS			
	C2001		CEHAT470M16
	C2010,C2011		CKSRYB104K16
	C2002-C2006		CKSRYF104Z50
RESISTORS			
	R2018,R2019		RAB4C102J
	R2002,R2004,R2013-R2015		RAB4C470J
	R2005,R2006,R2012,R2016,R2017		RAB4C472J
	Other Resistors		RS1/16S###J
OTHERS			
	CN2001	50P CONNECTOR	AKM1201
[Y RESONANCE BLOCK]			
SEMICONDUCTORS			
	IC2211		BA10393F
	IC2201,IC2202		TND506MD
	Q2213		2SC2412K
	Q2202,Q2203,Q2211,Q2212,Q2214		2SK3560
	Q2205,Q2206,Q2208,Q2209		2SK3723
	Q2201,Q2204,Q2207,Q2210		CPH5506
	D2209,D2223		1SS302
	D2228,D2229		1SS355
	D2202-D2205,D2207,D2208		EC11FS4
	D2213,D2214,D2216-D2219,D2222		EC11FS4
	D2226,D2227		EC11FS4
	D2201,D2206,D2211,D2215,D2220		TCU20A30
	D2225		TCU20A30
	D2210,D2224		UDZS16B
COILS AND FILTERS			
	L2204		ATH1119
	L2202		ATH1133
	L2203,L2205		ATH1134
	L2201		LFEA470J
CAPACITORS			
	C2212,C2213,C2226,C2227 (3.3/250V)		ACE1168
	C2211,C2224 (100p/630V)		ACG1104
	C2210,C2223 (0.1/630V)		ACG1108
	C2202,C2205,C2216,C2217		CCSRCH331J50
	C2230,C2232,C2233,C2235		CKSRYB104K16
	C2203,C2218		CKSRYB105K6R3
	C2201,C2208,C2215,C2219		CKSYB105K25
RESISTORS			
	R2240,R2241		RS1/10S1003F
	R2244-R2247		RS1/10S100J
	R2204,R2205,R2220,R2221,R2253		RS1/10S2R2J
	R2234		RS1/16S1202F
	R2235		RS1/16S3301F
	R2233		RS1/16S5601F
	R2242		RS1/16S8201F
	R2215,R2230		RS1MMF101J
	VR2201-VR2204 (1k)		CCP1390
	Other Resistors		RS1/16S###J
[Y SUS BLOCK]			
SEMICONDUCTORS			
	IC2302,IC2308		HCPL-M611
	IC2305		NJM2872F05
	IC2303,IC2307		STK795-511
	IC2301,IC2304,IC2309		TND301S
	Q2310		2SC2412K
	Q2303,Q2307		2SD1898
	Q2301		2SJ522
	Q2302,Q2308,Q2312		2SK3325-Z
	Q2309		HN1B04FU
	D2302		1SS302
	D2319		EC10QS04
	D2305		EC11FS4
	D2301		UDZS16B
	D2306,D2318		UDZS5.6B
COILS AND FILTERS			
	L2306,L2307		ATH1112
	L2304		LFEA100J
	L2308		LFEA101J
	L2301,L2302,L2305		LFEA470J

Mark No.	Description	Part No.
CAPACITORS		
	C2309-C2312,C2326,C2327	ACE1163
	C2329,C2330 (1.5/300V)	ACE1163
	C2314 (0.047/250V)	ACE1165
	C2302 (0.1/630V)	ACG1092
	C2316,C2331 (300/280V)	ACH1359
	C2303 (22/315V)	ACH1361
	C2336 (220/100V)	ACH1393
	C2306,C2334	CEHAT221M25
	C2308,C2324,C2339,C2340	CEHAT470M16
	C2304,C2320,C2338	CEHAT470M25
	C2305,C2322,C2323,C2325,C2333	CKSRYB104K16
	C2341	CKSRYB104K16
	C2301,C2307,C2328	CKSRYF104Z50
RESISTORS		
	R2332 (2.2,1/2W)	ACN1166
	R2309	RS1MMF132J
	R2310,R2311	RS1MMF472J
	R2312-R2314,R2322,R2323	RS3LMF100J
	R2348,R2352,R2358,R2359	RS3LMF1R8J
	Other Resistors	RS1/16S###J
OTHERS		
	KN2301-KN2305,KN2310,KN2312	ANK-142
	KN2314,KN2316 (GROUND PLATE)	ANK-142
	CN2301 11P CONNECTOR	B11B-EH
[Y SCAN BLOCK]		
SEMICONDUCTORS		
	IC2101,IC2103-IC2106,IC2108,IC2109	HCPL-M611
	IC2102,IC2107	TC74ACT540FT
COILS AND FILTERS		
	L2101-L2103	LFEA100J
CAPACITORS		
	C2104,C2111 (47/160V)	ACH1392
	C2101,C2107,C2113	CEHAT221M16
	C2102,C2103,C2105,C2106	CKSRYB104K16
	C2108-C2110,C2112,C2114	CKSRYB104K16
RESISTORS		
	R2121,R2128	RAB4C472J
	Other Resistors	RS1/16S###J
OTHERS		
	CN2101,CN2102 15P CONNECTOR	AKM1200
[Y D-D CON BLOCK]		
SEMICONDUCTORS		
	IC2410-IC2412	AN1431M
	IC2406	BA10358F
	IC2401	MIP0223SC
	IC2402-IC2405,IC2407-IC2409	TLP181(P-GR)
	Q2402,Q2407	2SA1037K
	Q2410	2SA1163
	Q2417	2SA1535
	Q2411-Q2414,Q2416	2SC2412K
	Q2405	2SC2713
	Q2403	2SD1664
	Q2401,Q2404	2SD1898

Mark No.	Description	Part No.
	Q2415	HN1C01FU
	D2430	1SS301
	D2410,D2419,D2436	1SS302
	D2409,D2418	1SS355
	D2404-D2407	EC11FS2
	D2403,D2414	EC11FS4
	D2402	EC8FS6
	D2427	RD91PA
	D2401	U1ZB330
	D2412,D2413,D2422	UDZS15B
	D2425,D2426	UDZS27B
	D2415	UDZS33B
	D2432	UDZS4.3B
	D2423,D2431	UDZS5.6B
COILS AND FILTERS		
	T2402	ATK1156
	T2403	ATK1157
	T2401	ATK1158
	L2402	LFEA100J
	L2401	LFEA101J
	L2403	LFEA470J
CAPACITORS		
	C2406 (100/160V)	ACH1360
	C2401 (22/315V)	ACH1361
	C2427	CEHAT100M50
	C2403	CEHAT101M16
	C2405,C2407,C2417	CEHAT101M25
	C2414	CEHAT221M16
	C2410	CEHAT221M25
	C2411	CEHAT331M25
	C2420	CEHAT470M2A
	C2409,C2419	CKSRYB103K50
	C2402,C2412,C2413,C2423,C2425	CKSRYB104K16
	C2431,C2432,C2434-C2436	CKSRYB104K16
	C2441-C2443	CKSRYB104K16
	C2415,C2421,C2428	CKSRYB105K6R3
	C2404,C2408,C2416,C2418,C2426	CKSRYF104Z50
	C2429	CKSRYF104Z50
RESISTORS		
	R2429 (180k,1/2W)	ACN1225
	R2435,R2439	RS1/10S2202F
	R2402-R2404	RS1/10S3902F
	R2442	RS1/16S1201F
	R2468	RS1/16S1202F
	R2424	RS1/16S2001F
	R2420,R2427,R2438	RS1/16S2201F
	R2467	RS1/16S3301F
	R2457-R2460	RS1/16S4701F
	R2506	RS3LMF151J
	VR2401,VR2402 (1k)	CCP1390
	Other Resistors	RS1/16S###J
OTHERS		
	2401 HEATSINK	ANH1614
	2401 SCREW	BBZ30P080FZK

Mark	No.	Description	Part No.

RGB ASSY

[RGB BLOCK]

SEMICONDUCTORS

	IC7411	BD6522F
⚠	IC7412	M5291FP
	IC7402	MM1522XU
	IC7401	MM3012XN
	IC7404	NJM12904V
⚠	IC7408, IC7409	PQ05DZ11
⚠	IC7405, IC7410	PQ20WZ11
⚠	IC7406, IC7407	PQ3DZ13
	IC7403	TC74VHC08FT
	Q7405	2SA1586
	Q7407, Q7408, Q7410, Q7411	HN1A01FU
	Q7404	HN1C01FU
	Q7401	RN1901
	Q7409	RN1902
	D7408	1SS301
	D7407, D7409-D7414	1SS355
	D7415, D7416	EC11FS2

COILS AND FILTERS

	L7401	ATH1125

CAPACITORS

	C7408	ACH1357
	C7414, C7419, C7434, C7437 (100/25V)	ACH1374
	C7447, C7450 (47microF/16V)	ACH1391
	C7416, C7423, C7424, C7430 (100microF/16V)	ACH1394
	C7418, C7421, C7426, C7432, C7445 (100microF/6.3V)	ACH1396
	C7452 (100microF/6.3V)	ACH1396
	C7403 (22microF/16V)	ACH1400
	C7428, C7429, C7448	CCSRCH221J50
	C7440, C7459-C7466	CKSRYB102K50
	C7407, C7409, C7453-C7455	CKSRYB103K50
	C7457, C7458	CKSRYB103K50
	C7436	CKSRYB104K16
	C7446	CKSRYB821K50
	C7413, C7435	CKSRYF104Z50
	C7402, C7410	CKSRYF105Z10
	C7404-C7406, C7411, C7412, C7415	CKSSYF104Z16
	C7417, C7420, C7422, C7425, C7427	CKSSYF104Z16
	C7431, C7433, C7439, C7441-C7444	CKSSYF104Z16
	C7449, C7451	CKSSYF104Z16

RESISTORS

	R7402, R7405, R7417	RAB4CQ101J
	R7426	RAB4CQ103J
	R7480	RS1/10S1R5J
	R7412, R7420, R7486	RS1/16S1001F
	R7437, R7439, R7467, R7469, R7476	RS1/16S1002F
	R7461	RS1/16S1501F
	R7422	RS1/16S1800F
	R7440, R7445	RS1/16S2201F
	R7477	RS1/16S2202F
	R7484	RS1/16S3301F
	R7438	RS1/16S4700F
	R7465	RS1/16S4702F
	R7460	RS1/16S6201F
	R7447	RS1/16S7500F
	R7478	RS1/16S8201F
	Other Resistors	RS1/16S###J

OTHERS

	CN7405 12P PLUG	AKM1203
	CN7401 15P PLUG	AKM1232
	CN7410 50P PLUG	AKM1270

[MAIN LPF BLOCK]

SEMICONDUCTORS

	IC6402	AN5870SB
	IC6404	BA7078AF
	IC6403	BA7657F
	IC6401	SM5301BS
	IC6407	TC74VHC08FT
	IC6405	TC74VHC125FT
	Q6419-Q6421	2SA1586
	Q6407, Q6417	DTC124EUA
	Q6402-Q6406, Q6408, Q6410, Q6412	HN1B04FU
	D6404	1SS302

COILS AND FILTERS

	L6401	LCTAW4R7J2520
	L6402	LCTAWR68J2520

CAPACITORS

	C6409, C6436, C6437, C6462, C6469	ACH1357
	C6402, C6405, C6406, C6427, C6428	ACH1391
	C6431 (47microF/16V)	ACH1391
	C6416, C6417, C6424 (100microF/16V)	ACH1394
	C6433 (10microF/16V)	ACH1399
	C6439 (22microF/16V)	ACH1400
	C6445	CCSRCH151J50
	C6435, C6467, C6468	CCSRCH470J50
	C6401, C6403, C6404, C6414, C6415	CKSRYB103K50
	C6423, C6429, C6430, C6432, C6438	CKSRYB103K50
	C6446, C6449, C6451, C6454, C6456	CKSRYB103K50
	C6459, C6461, C6470-C6476	CKSRYB103K50
	C6463	CKSRYB104K25
	C6408, C6411, C6412, C6421, C6455	CKSRYB105K6R3
	C6457, C6460	CKSRYB105K6R3
	C6458	CKSRYB471K50
	C6443	CKSRYB474K10
	C6442	CKSRYB562K50
	C6407, C6410, C6413, C6418-C6420	CKSSYF104Z16
	C6425, C6426, C6434, C6440, C6441	CKSSYF104Z16
	C6444, C6447, C6448, C6450	CKSSYF104Z16
	C6452, C6453	CKSSYF104Z16

RESISTORS

	R6489	RAB4CQ470J
	R6422	RS1/16S1101F
	R6526-R6528	RS1/16S2200F
	R6428, R6429	RS1/16S3000F
	R6547-R6549	RS1/16S75R0F
	Other Resistors	RS1/16S###J

OTHERS

	K6401-K6406 TEST PIN	AKX9002
	CN6402 6P PLUG	KM200NA6

Mark No.	Description	Part No.
[MAIN AD BLOCK]		
SEMICONDUCTORS		
	IC6001	CXA3516AR
	IC6002-IC6008	TC74LCX541FT
	Q6001	2SC4116
	D6001	1SS355
COILS AND FILTERS		
	L6001	LCTAWR68J2520
CAPACITORS		
	C6001, C6005, C6010, C6028, C6041	ACH1396
	C6043, C6051, C6054 (100microF/6.3V)	ACH1396
	C6020	CCSRCH101J50
	C6011	CCSRCH220J50
	C6017	CCSRCH331J50
	C6003, C6018, C6024, C6025	CKSRYB105K6R3
	C6033, C6034, C6037, C6038, C6045	CKSRYB105K6R3
	C6062-C6068	CKSRYB471K50
	C6002, C6004, C6006-C6009	CKSSYF104Z16
	C6012-C6016, C6021-C6023	CKSSYF104Z16
	C6026, C6027, C6029-C6032	CKSSYF104Z16
	C6035, C6036, C6039, C6040, C6042	CKSSYF104Z16
	C6044, C6046-C6050, C6052, C6053	CKSSYF104Z16
	C6055-C6061	CKSSYF104Z16
RESISTORS		
	R6001, R6004, R6013, R6014	RAB4CQ100J
	R6020, R6021, R6024, R6027, R6033	RAB4CQ100J
	R6038, R6044, R6054	RAB4CQ100J
	R6073-R6085	RAB4CQ330J
	R6023	RN1/16SE3001D
	R6018	RS1/16S2201F
	R6016	RS1/16S2701F
	R6019	RS1/16S3301F
	Other Resistors	RS1/16S###J
OTHERS		
	K6001-K6007, K6010-K6013 TEST PIN	AKX9002
[SUB LPF & AD BLOCK]		
SEMICONDUCTORS		
	IC6602	AD9883AKST-110
	IC6604	BA7078AF
	IC6601	SM5301BS
	IC6608-IC6614	TC74LCX541FT
	IC6605	TC74VHC08FT
	IC6603, IC6607	TC74VHC125FT
	Q6603, Q6604	DTC124EUA
	Q6605	HN1B04FU
COILS AND FILTERS		
	F6601	ATF1194
	L6701	LCTAWR68J2520
CAPACITORS		
	C6635-C6637, C6640	ACH1357
	C6633 (10microF/16V)	ACH1399
	C6644	CCSRCH151J50
	C6638	CKSRYB103K50
	C6604, C6624	CKSRYB104K16
	C6648	CKSRYB104K25
	C6608, C6611, C6612, C6621	CKSRYB105K6R3
	C6630-C6632	CKSRYB105K6R3
	C6646, C6656-C6661	CKSRYB471K50
	C6609, C6614, C6623	CKSRYB473K16
	C6642	CKSRYB474K10
	C6641	CKSRYB562K50
	C6602	CKSRYB822K50
	C6601	CKSRYB823K16
	C6605-C6607, C6610, C6613	CKSSYF104Z16
	C6615-C6620, C6625-C6629, C6634	CKSSYF104Z16
	C6639, C6643, C6645, C6647	CKSSYF104Z16
	C6649-C6655	CKSSYF104Z16
RESISTORS		
	R6699-R6710, R6723-R6728	RAB4CQ0R0J
	R6729-R6734	RAB4CQ101J
	R6608, R6613, R6621, R6627	RAB4CQ470J
	R6643, R6644, R6667-R6672	RAB4CQ470J
	R6676-R6678, R6681-R6685	RAB4CQ470J
	R6612, R6619, R6620	RS1/16S1000F
	R6625	RS1/16S1101F
	R6607, R6611, R6626	RS1/16S1300F
	R6601	RS1/16S2701F
	Other Resistors	RS1/16S###J
OTHERS		
	K6601-K6607 TEST PIN	AKX9002
[BUS SW1 BLOCK]		
SEMICONDUCTORS		
	IC5701	PD6435A
CAPACITORS		
	C5701 (47microF/16V)	ACH1391
	C5709, C5710	CCSRCH150J50
	C5721-C5737	CKSRYB103K50
	C5702-C5708, C5711, C5712	CKSSYF104Z16
	C5714-C5718	CKSSYF104Z16
RESISTORS		
	R5703-R5706, R5708-R5712, R5714	RAB4CQ100J
	R5717, R5721, R5735, R5739-R5750	RAB4CQ100J
	R5755, R5756, R5762, R5763	RAB4CQ100J
	R5768-R5771	RAB4CQ100J
	R5728-R5734, R5782-R5787	RAB4CQ103J
	Other Resistors	RS1/16S###J
OTHERS		
	CN5701 120P PCI BUS SOCKET	AKP1220
	X5701 CERAMIC RESONATOR	ASS1169
[BUS SW2 BLOCK]		
SEMICONDUCTORS		
	IC5801	PD6435A
CAPACITORS		
	C5801 (47microF/16V)	ACH1391
	C5809, C5810	CCSRCH150J50
	C5802-C5808, C5811, C5812	CKSSYF104Z16
	C5814-C5818	CKSSYF104Z16
RESISTORS		
	R5816-R5825, R5827, R5835, R5849	RAB4CQ100J
	R5852, R5854, R5856, R5858, R5860	RAB4CQ100J
	R5868-R5871, R5877	RAB4CQ100J
	R5802-R5808, R5812-R5814, R5831	RAB4CQ103J

Mark No.	Description	Part No.
	R5837, R5844, R5883	RAB4CQ103J
	R5845, R5850, R5851, R5853, R5855	RAB4CQ470J
	R5857, R5859, R5861-R5863, R5876	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	X5801 CERAMIC RESONATOR	ASS1169
	[IC2 BLOCK]	
	SEMICONDUCTORS	
	IC7001, IC7002	HY57V643220CT-7
	IC7004	PE5362A
	IC7003	TC74LCX125FT
	COILS AND FILTERS	
	F7001, F7002 EMI FILTER	ATF1194
	CAPACITORS	
	C7029, C7041 (100microF/6.3V)	ACH1396
	C7065	CCSRCH100D50
	C7066-C7068	CCSRCH221J50
	C7001-C7024, C7026-C7028	CKSSYF104Z16
	C7032-C7040, C7042-C7063	CKSSYF104Z16
	C7031	DCH1165
	RESISTORS	
	R7034	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	K7001-K7003 TEST PIN	AKX9002
	X7001 (85MHz)	ASS1174
	[IC3 BLOCK]	
	SEMICONDUCTORS	
	IC7102	24LC02B(I)SN
	IC7101	PD5855A
	COILS AND FILTERS	
	F7101, F7102	ATF1194
	CAPACITORS	
	C7103, C7120, C7138 (100microF/6.3V)	ACH1396
	C7141	CCSRCH100D50
	C7101, C7102, C7104-C7119	CKSSYF104Z16
	C7121-C7137, C7139, C7140, C7142	CKSSYF104Z16
	RESISTORS	
	R7102, R7105-R7108, R7110, R7111	RAB4CQ330J
	R7128, R7129, R7132, R7133	RAB4CQ330J
	R7136, R7137	RAB4CQ330J
	R7154	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN7101 114P FFC CONNECTOR	AKM1216
	K7101, K7102 TEST PIN	AKX9002
	[IC3 FLASH BLOCK]	
	SEMICONDUCTORS	
	IC7152	MBM29PL3200BE70PFV
	CAPACITORS	
	C7152, C7153, C7155-C7158, C7160	CKSSYF104Z16
	C7162	CKSSYF104Z16

Mark No.	Description	Part No.
	RESISTORS	
	Other Resistors	RS1/16S###J
	[MAIN UCOM BLOCK]	
	SEMICONDUCTORS	
	IC7205	24LC128(I)SN
	IC7201, IC7204	74VHCT00AMTC
	IC7207	MB91F355APMTGE1
	IC7210	PST3612UR
	IC7203, IC7206	PST3628UR
	IC7209	TC74VHC08FT
	IC7202	TC74VHC125FT
	IC7208	TC74VHCT541AFT
	Q7201	2SJ461A
	Q7202	DTC124EUA
	D7202	1SS355
	D7203	SML-310MT
	CAPACITORS	
	C7205, C7236 (47microF/16V)	ACH1391
	C7143, C7203	CCSRCH220J50
	C7213, C7218	CCSRCH7R0D50
	C7248-C7251	CKSRYB102K50
	C7235, C7245	CKSRYB103K50
	C7226, C7237	CKSRYB104K16
	C7230, C7242	CKSRYB104K25
	C7216	CKSRYB472K50
	C7201, C7202, C7209-C7212	CKSSYF104Z16
	C7214, C7215, C7219-C7225	CKSSYF104Z16
	C7227-C7229, C7232-C7234, C7238	CKSSYF104Z16
	C7240, C7241, C7243, C7244	CKSSYF104Z16
	C7246, C7247	CKSSYF104Z16
	RESISTORS	
	R7231	RAB4CQ0R0J
	R7229	RAB4CQ101J
	R7256	RAB4CQ103J
	R7218, R7219, R7284-R7286, R7301	RAB4CQ470J
	R7309, R7311-R7314, R7317	RAB4CQ470J
	R7201	RAB4CQ472J
	R7212, R7232	RS1/16S1202F
	Other Resistors	RS1/16S###J
	OTHERS	
	CN7201 8P PLUG	AKM1225
	X7201 CERAMIC RESONATOR	ASS1170
	SIDE KEY ASSY	
	SWITCHES AND RELAYS	
	S4801-S4811	ASG1088
	OTHERS	
	CN4801 8P CONNECTOR	AKM1207
	AV I/O ASSY	
	[AV I/O BLOCK]	
	SEMICONDUCTORS	
	IC7609	24LCS21A
	IC7610, IC7613	AN5870SB
	IC7602, IC7605-IC7607	BA4558F-HT
	IC7603	BD3869AF

Mark	No.	Description	Part No.
⚠	IC7604		NJM78L09UA
	IC7601, IC7608		TC4052BFT
	IC7612		TC74AC04FT
	IC7611		TC74VHCT541AFT
	Q7602, Q7605, Q7702		2SC4116
	Q7603		DTA124EUA
	Q7604, Q7606-Q7608		DTC124EUA
	Q7701		HN1C01FU
	Q7601		RN1902
	Q7609		SM6K2
	D7601		1SS301
	D7606-D7608, D7610, D7611		1SS302
	D7613, D7614, D7616, D7617		1SS302
	D7619, D7701		1SS355
	D7602, D7603, D7605, D7609		UDZS5.6B
	D7604		UDZS6.8B
	CAPACITORS		
	C7633, C7634		CCSRCH101J50
	C7673, C7674		CCSRCH220J50
	C7631, C7632		CCSRCH221J50
	C7611, C7612		CCSRCH471J50
	C7722		CEHAT100M50
	C7654		CEHAT101M10
	C7665		CEHAT101M16
	C7623, C7648		CEHAT220M50
	C7705		CEHAT221M6R3
	C7714, C7716, C7718		CEHAT331M10
	C7619, C7635, C7637, C7695, C7697		CEHAT470M16
	C7721		CEHAT470M16
	C7681, C7686, C7690		CEHAT471M16
	C7601, C7602, C7609, C7610, C7614		CKSQYB225K10
	C7616, C7638, C7639, C7643, C7653		CKSQYB225K10
	C7627-C7630, C7640, C7650		CKSRYB102K50
	C7642, C7652, C7660, C7661, C7666		CKSRYB103K50
	C7676, C7680, C7685, C7689		CKSRYB103K50
	C7698-C7703, C7707, C7712, C7713		CKSRYB103K50
	C7715, C7717		CKSRYB103K50
	C7621, C7622		CKSRYB104K16
	C7603, C7620, C7662, C7663, C7667		CKSRYB105K10
	C7675, C7677, C7678, C7684		CKSRYB105K10
	C7693, C7694, C7723		CKSRYB105K10
	C7641, C7651		CKSRYB222K50
	C7646, C7656		CKSRYB471K50
	C7617, C7618, C7624-C7626, C7636		CKSSYF104Z16
	C7644, C7647, C7649, C7655, C7664		CKSSYF104Z16
	C7668, C7679, C7682, C7683, C7687		CKSSYF104Z16
	C7691, C7692, C7696, C7704, C7706		CKSSYF104Z16
	C7708-C7711, C7720		CKSSYF104Z16
	RESISTORS		
	R7751-R7753		RS1/16S2200F
	R7712, R7725		RS1/16S2201F
	R7699-R7701, R7741-R7743		RS1/16S27R0F
	R7653, R7654, R7673, R7674		RS1/16S3301F
	R7709-R7711		RS1/16S75R0F
	Other Resistors		RS1/16S###J
	OTHERS		
	CN7602, CN7603 MINI JACK		AKN1069
	JA7606, JA7607 15P D-SUB SOCKET		AKP1241

Mark	No.	Description	Part No.
	CN7601 15P PLUG		KM200NA15
	[IF UCOM BLOCK]		
	SEMICONDUCTORS		
	IC8705		24LC01B
	IC8702		HD64F3687FP
	IC8703		PST9230N
	IC8701		TC74VHC08FT
	IC8704		TC7W126FU
	Q8701		2SJ461A
	Q8708		DTA124EUA
	Q8702		DTC124EUA
	COILS AND FILTERS		
	L8702		LCTAWR68J2520
	CAPACITORS		
	C8706, C8707		CCSRCH120J50
	C8708, C8714		CEHAT470M16
	C8704, C8718		CEHAT471M6R3
	C8717, C8720		CKSRYB103K50
	C8722-C8724		CKSRYB471K50
	C8709		CKSRYB472K50
	C8701-C8703, C8705, C8711-C8713		CKSSYF104Z16
	C8715, C8716, C8719, C8721, C8725		CKSSYF104Z16
	RESISTORS		
	R8719, R8720, R8723, R8724, R8726		RAB4C101J
	R8702, R8704, R8745		RAB4C103J
	R8736		RS1/16S1302F
	Other Resistors		RS1/16S###J
	OTHERS		
	CN8701 8P PLUG		AKM1225
	K8701-K8703 TEST PIN		AKX9002
	X8702 CERAMIC RESONATOR		ASS1168
	X8701 (32.768kHz)		ASS1172
	CN8704 6P PLUG		KM200NA6
	[DVI BLOCK]		
	SEMICONDUCTORS		
	IC7502		24LCS21A
	IC7511		BD6522F
	IC7503		SII1161CTG100
	IC7504-IC7510		TC74LCX541FT
	Q7503		DTA124EUA
	Q7501, Q7502		DTC124EUA
	D7501		1SS301
	D7503, D7504		1SS302
	D7502		UDZS6.8B
	COILS AND FILTERS		
	F7506-F7511		ATF1211
	CAPACITORS		
	C7524, C7526, C7530, C7532		CCSRCH101J50
	C7534, C7535, C7537, C7538		CCSRCH101J50
	C7541, C7542, C7546, C7548-C7550		CCSRCH101J50
	C7504, C7507		CCSRCH221J50
	C7528, C7578, C7579		CEHAT101M10
	C7522		CEHAT221M6R3
	C7502, C7510, C7516, C7518		CEHAT470M16

Mark	No.	Description	Part No.
	C7503, C7506		CKSRYB222K50
	C7514, C7520, C7573-C7577		CKSRYB471K50
	C7501, C7509, C7513, C7515, C7517		CKSSYF104Z16
	C7519, C7521, C7523, C7525, C7527		CKSSYF104Z16
	C7529, C7531, C7533, C7536		CKSSYF104Z16
	C7539, C7540, C7543-C7545, C7547		CKSSYF104Z16
	C7551-C7559		CKSSYF104Z16
	RESISTORS		
	R7560-R7565, R7568-R7573		RAB4CQ0R0J
	R7524-R7529, R7536, R7540		RAB4CQ100J
	R7552-R7555		RAB4CQ100J
	R7578-R7590		RAB4CQ470J
	R7538		RS1/16S3900F
	Other Resistors		RS1/16S###J
	OTHERS		
	CN7501 STEREO MINI JACK		AKN1069
	CN7503 24P DVI TERMINAL		AKP1216

AUDIO AMP ASSY

Mark	No.	Description	Part No.
	SEMICONDUCTORS		
	IC5002		BA4558F-HT
⚠	IC5003		LA4625
⚠	IC5004		PQ12DZ11
⚠	IC5001		SI-8120S
	Q5005, Q5007, Q5008		2SA1586
	Q5001, Q5009		2SC4116
	Q5011, Q5012		2SD2114K
	Q5013		DTA124EUA
	D5003		1SS301
	D5001		1SS302
	D5002		1SS355
	D5005		RK46
	COILS AND FILTERS		
	L5002		ATH1159
	CAPACITORS		
	C5049, C5080		CEHAT101M16
	C5045		CEHAT220M50
	C5010		CEHAT221M10
	C5022		CEHAT222M16
	C5047, C5048, C5081		CEHAT2R2M50
	C5050		CEHAT330M25
	C5005-C5008, C5016		CEHAT470M16
	C5051		CEHATR47M50
	C5019, C5020		CEHAZL471M25
	C5002, C5004, C5017, C5027		CKSRYB103K50
	C5055-C5058		CKSRYB104K25
	C5043, C5044		CKSRYB222K50
	RESISTORS		
	R5049-R5052		RD1/4MUF2R2J
	R5053-R5056		RS1/10S5R6J
	R5001		RS1/16S1502F
	R5005, R5006, R5009, R5010		RS1/16S3301F
	R5003, R5004, R5007, R5008		RS1/16S6801F
	Other Resistors		RS1/16S###J
	OTHERS		
	CN5002 6P L-TYPE PLUG		KM200NA6
	5001 SCREW		VBB30P100FNI
	KN5001, KN5002 (WRAPPING TERMINAL)		VNF1084

COMM SLOT ASSY

Mark	No.	Description	Part No.
	SEMICONDUCTORS		
	IC9451		SP3232ECY
	IC9452, IC9454		TC74VHC00FT
	IC4953, IC4955		TC74VHC125FT
	CAPACITORS		
	C9455		CEJQ470M6R3
	C9452, C9469-C9472		CKSRYB471K50
	C9451, C9453, C9454, C9456-C9458		CKSSYF104Z16
	C9462, C9467, C9468		CKSSYF104Z16
	RESISTORS		
	Other Resistors		RS1/16S###J
	OTHERS		
	3500 SCREW		ABA1295
	3330 RIVET		AEP-211
	JA9453 9P D-SUB SOCKET		AKP1240
	JA9451, JA9452 6P MINI DIN JACK		AKP1254
	3334 PROTECT SHEET 92		AMR3396
	3214 SLOT PANEL 92		ANG2611
	3526 HEXAGON HEADED SCREW		BBA1051
	9451 SCREW TERMINAL		VNE1949

COMM SLOT IF ASSY

Mark	No.	Description	Part No.
	SEMICONDUCTORS		
	IC8901		TC74VHC00FT
	Q8902		2SC4116
	COILS AND FILTERS		
	L8901		LCTAW221J3225
	CAPACITORS		
	C8902		CKSRYB104K25
	C8901		CKSSYF104Z16
	RESISTORS		
	Other Resistors		RS1/16S###J
	OTHERS		
	CN8904 (46P CARD EDGE CONNECTOR)		AKP1252
	CN8902 10P L-TYPE PLUG		KM200NA10L
	CN8903 11P L-TYPE PLUG		KM200NA11L
	CN8905 6P L-TYPE PLUG		KM200NA6L

VIDEO SLOT I/F ASSY

Mark	No.	Description	Part No.
	SEMICONDUCTORS		
	IC8952		24LC01B
	Q8953		DTC124EUA
	D8951, D8952		UDZS5.6B
	COILS AND FILTERS		
	L8951		ATX1008

Mark No.	Description	Part No.
CAPACITORS		
	C8952	CEHAT470M16
	C8953	CKSSYF104Z16
RESISTORS		
	Other Resistors	RS1/16S###J
OTHERS		
	CN8953 120P SOCKET	AKP1219
	CN8954 184P PCI BUS SOCKET	AKP1251
	CN8955 50P SOCKET	AKP1253
	KN8951, KN8952 GROUND PLATE	ANK1664
	CN8952 11P L-TYPE PLUG	KM200NA11L

KEY CONTROL ASSY

SEMICONDUCTORS		
	IC9001	PD5719A
	Q9001	2SC4116
	D9001-D9003, D9005-D9008	1SS302
	D9004	1SS355
CAPACITORS		
	C9006-C9008	CCSRCH101J50
	C9005	CEAT470M16
	C9001-C9003	CKSRYB472K50
	C9004	CKSSYF104Z16
RESISTORS		
	R9008	RAB4C182J
	Other Resistors	RS1/16S###J
OTHERS		
	CN9002 8P FFC CONNECTOR	AKM1207
	X9001 CERALOCK	ASS1162
	CN9001 3P L-TYPE PLUG	KM200NA3L

LED OPT ASSY

SEMICONDUCTORS		
	Q9652	DTC143EUA
	Q9051	HN1B04FU
	Q9651	RN2901
	D9051	S9561
	D9652	SML-310MT
	D9651	SML-311UT
CAPACITORS		
	C9652-C9655	CCSRCH101J50
	C9054	CKSRYB103K50
	C9052, C9055, C9056	CKSRYB105K10
	C9051, C9053, C9651	CKSSYF104Z16
RESISTORS		
	Other Resistors	RS1/16S###J

IR RECEIVE ASSY

SEMICONDUCTORS		
	Q4901	2SC4116
	D4902	1SS302
	D4901	1SS355
CAPACITORS		
	C4905	CCSRCH101J50
	C4901	CEAT470M16
	C4903	CKSRYB102K50
	C4907	CKSRYB103K50
	C4902, C4904	CKSSYF104Z16
RESISTORS		
	Other Resistors	RS1/16S###J

SP TERMINAL L ASSY

SEMICONDUCTORS		
	IC9752	MM1522XU
	IC9751	MM3012XN
COILS AND FILTERS		
	L9701, L9702	ATF1206
CAPACITORS		
	C9703, C9704	CCSRCH101J50
	C9706, C9708-C9711	CCSRCH221J50
	C9753, C9756	CEAT470M16
	C9754	CKSRYB103K50
	C9752, C9755	CKSRYB105K10
	C9705	CKSRYB332K50
	C9707	CKSRYF473Z50
	C9751, C9757	CKSSYF104Z16
RESISTORS		
	R9703, R9704	RD1/2MMF100J
	R9757, R9760	RS1/16S1001F
	Other Resistors	RS1/16S###J
OTHERS		
	CN9701 2P SPEAKER TERMINAL	AKE1041
	CN9702 6P PLUG	KM200NA6

SP TERMINAL R ASSY

COILS AND FILTERS		
	L9801, L9802	ATF1206
CAPACITORS		
	C9804, C9805	CCSRCH101J50
	C9801, C9808-C9811	CCSRCH221J50
	C9806	CKSRYB332K50
	C9807	CKSRYF473Z50
RESISTORS		
	R9803, R9804	RD1/2MMF100J
	Other Resistors	RS1/16S###J
OTHERS		
	CN9802 2P SPEAKER	AKE1041

COVER ASSY

This assembly has no service part.

AV I/O I/F ASSY

OTHERS		
	CN2101 120P PCI BUS SOCKET	AKP1220

Mark	No.	Description	Part No.

DIGITAL VIDEO ASSY

[DIGITAL IF BLOCK]

COILS AND FILTERS

	F5001, F5002, F5004, F5005	ATF1194

RESISTORS

	R5101-R5115, R5131	RAB4C470J
	Other Resistors	RS1/16S###J

OTHERS

	CN5001 114P FFC CONNECTOR	AKM1216
	CN5002 PH CONNECTOR	AKM1249
	K5002-K5004, K5007 TEST PIN	AKX9002

[MODULE UCOM BLOCK]

SEMICONDUCTORS

	IC5206	24LC04B(I)SN
	IC5201	M30626FHPGP-P
	IC5205	PST3628UR
	IC5208	TC74VHC08FT
	IC5213	TC74VHC123AFT
	IC5214, IC5215	TC74VHC32FT
	IC5211, IC5212	TC74VHC541FT
	IC5209	TC7W126FU
	Q5201	2SJ461A
	D5207-D5212	1SS301
	D5217, D5218	1SS355
	D5201	SML-310LT

SWITCHES

	S5201	ASH1047

CAPACITORS

	C5213, C5225	ACH1357
	C5206, C5223, C5231, C5245-C5262	CKSRYB102K50
	C5264	CKSRYB102K50
	C5232	CKSRYB104K16
	C5263	CKSRYB104K25
	C5230	CKSRYB105K6R3
	C5205	CKSRYB472K50
	C5201-C5204, C5208, C5210-C5212	CKSSYF104Z16
	C5218, C5224, C5226, C5227	CKSSYF104Z16
	C5243, C5244	CKSSYF104Z16

RESISTORS

	R5209, R5211, R5212, R5235	RAB4C101J
	R5254, R5255, R5265, R5266	RAB4C101J
	R5205	RAB4C103J
	R5270, R5271	RAB4C472J
	R5256, R5257	RAB4C474J
	Other Resistors	RS1/16S###J

OTHERS

	CN5201 8P PLUG	AKM1225
	CN5202 PH CONNECTOR	AKM1242
	K5201 TEST PIN	AKX9002
⚠	X5201 (16MHz)	ASS1178

[PANEL FLASH BLOCK]

SEMICONDUCTORS

	IC5305	MBM29PL160BD-75PFTN
	IC5303	PST3612UR
	IC5301	PST3628UR
	IC5302	TC74VHC08FT
	Q5301	RN1901
	D5301-D5310	1SS302

CAPACITORS

	C5320	CCSRCH470J50
	C5304, C5307	CKSRYB102K50
	C5311, C5314	CKSRYB104K16
	C5303, C5306	CKSRYB472K50
	C5301, C5302, C5305, C5309, C5313	CKSSYF104Z16
	C5316	CKSSYF104Z16

RESISTORS

	R5317, R5318	RAB4C101J
	Other Resistors	RS1/16S###J

OTHERS

	CN5301 15P PLUG	AKM1232
	K5301 TEST PIN	AKX9002
⚠	X5302 (85MHz)	ASS1174
⚠	X5301 (60MHz)	ASS1176

[IC4 BLOCK]

SEMICONDUCTORS

	IC5401	PD5856A
	D5401	SML-310LT
	D5402	SML-310MT

COILS AND FILTERS

	F5401, F5403, F5409, F5410	ATF1194

CAPACITORS

	C5401, C5413, C5417, C5424 (100microF/16V)	ACH1396
	C5434, C5435	CKSRYB102K50
	C5402-C5412, C5414-C5416	CKSSYF104Z16
	C5418-C5423, C5425-C5431	CKSSYF104Z16

RESISTORS

	R5406, R5421	RAB4C101J
	R5408-R5413, R5415, R5416, R5419	RAB4C220J
	R5422	RAB4C220J
	R5405	RS1/16S5601F
	Other Resistors	RS1/16S###J

OTHERS

	K5401 TEST PIN	AKX9002

[ADDRESS CN BLOCK]

Other Resistors

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	CN5521 50P CONNECTOR	AKM1201
⚠	CN5501-CN5508 40P CONNECTOR	AKM1217
	CN5511 30P CONNECTOR	AKM1218

[DIGITAL DD CON BLOCK]

SEMICONDUCTORS

⚠	IC5602	PQ05DZ11
⚠	IC5603	PQ09DZ11
	Q5601, Q5603	HN1C01FU
	Q5605	RN1901

Mark No.	Description	Part No.
	D5602, D5603, D5609, D5610	1SS355
	D5601	HZU2.2B
	D5604	UDZS5.1B

CAPACITORS

	C5601, C5603, C5607, C5614, C5616 (100microF/16V)	ACH1394
	C5602, C5604, C5615, C5617	CKSRYB103K50
	C5605, C5606, C5610	CKSSYF104Z16

RESISTORS

	R5601	ACN1162
	R5627	ACN1168
	Other Resistors	RS1/16S###J

OTHERS

⚠	CN5602 PH CONNECTOR 7P	AKM1246
⚠	CN5601 PH CONNECTOR 11P	AKM1250

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
DIGITAL VIDEO Assy	➡	Refer to the "7.1.6 BACKUP THE ADJUSTMENT VALUES FOR THE MAIN UNIT."
43 X DRIVE Assy	➡	No adjustment required
43 Y DRIVE Assy	➡	No adjustment required
AV I/O Assy	➡	No adjustment required
RGB Assy	➡	No adjustment required
VIDEO SLOT Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required
Service Panel	➡	VSUS and VOFS voltage setup, Panel WB check

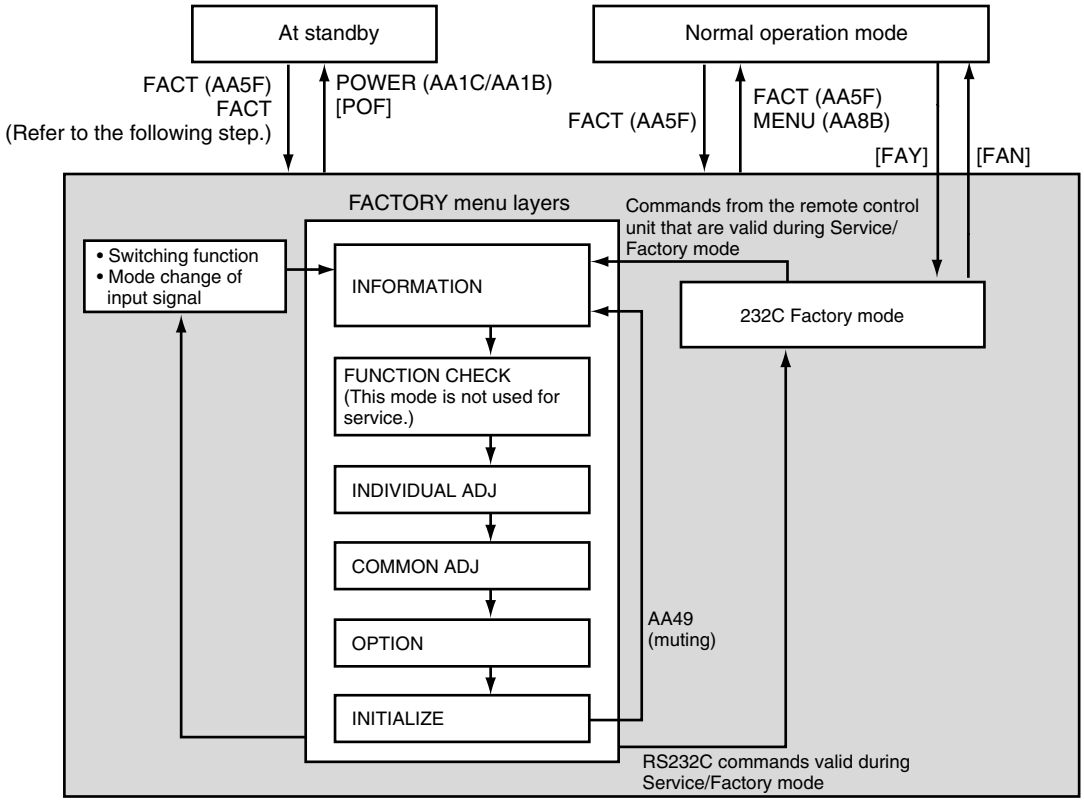
■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
DIGITAL VIDEO Assy	➡	No adjustment required
43 X DRIVE Assy	➡	Replacement and repair of IC1101 and IC1102 are impossible.
43 Y DRIVE Assy	➡	Replacement and repair of IC2201 and IC2202 are impossible.
AV I/O Assy	➡	Replacement and repair of IC7610 and IC8705 are impossible.
RGB Assy	➡	Replacement and repair of IC6001, IC6401, IC6403, IC6601, IC6602 and IC7205 are impossible.
VIDEO SLOT Assy	➡	Replacement and repair of IC6107, IC6255, IC6257 and IC7902 are impossible.
Other assemblies	➡	No adjustment required

6.2 SERVICE FACTORY MODE

Commands in Service/Factory mode must be issued using the remote control unit supplied with the Plasma Display.

State Transition Diagram



6.3 HOW TO ENTER FACTORY MODE

For adjustments, it is necessary to enter Service/Factory mode. There are two ways to enter Service/Factory mode: by using the remote control unit, or by using RS232C commands from your PC.

When the unit is in Standby (STB) Mode

• Please refer to the technical document (Service Knowhow)

When the power is on

No.	Method	Procedures
1	Remote control unit	When the conventional Service/Factory code (AA5F) is sent, the unit will enter Service/Factory mode.
2	PC	Connect your PC via its RS232C port, and send the FAY command.

■ Operation when Service/Factory mode is entered

● Functions whose settings are set to OFF

The settings of the following functions are set to OFF when Service/Factory mode is entered (including when this mode is entered by receiving the FAY command):

- SPLIT (The display will become that of the main input.)
- STILL
- MASK CONTROL
- ORBITER
- POINT ZOOM

● User's setting data

User setting data are set as follows:

- Although user's adjustment data for video/audio adjustment and various adjustment are stored in memory, they are not reflected on the display.
- Although user's adjustment data for display are stored in memory, display adjustment data are reset to the default settings.
- Screen size and sound volume reflect user settings.
- The COLOR DECODING and SIGNAL FORMAT settings are reset to the default values.

● Setting data for Integrator mode

Setting data for Integrator mode will change as follows:

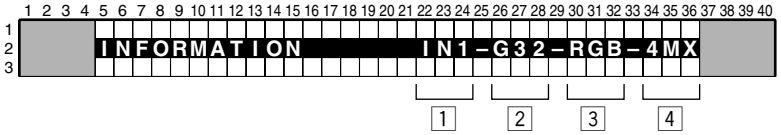
- Although video/audio adjustment data and various data for Integrator mode are stored in memory, they are not reflected on the display.
- Although adjustment data for display in Integrator mode are stored in memory, display adjustment data are reset to the default settings.

■ Functions of the keys on the remote control unit in Service/Factory mode

SR Function	Main Function	Description
MUTING	Switching main items	For shifting to the next (top) main item
▼ (DOWN)	Switching subitems	For shifting to the next (downward) subitem
▲ (UP)	Switching subitems	For shifting to the previous (upward) subitem
◄ (LEFT)	Increasing adjustment value	For increasing adjustment value
► (RIGHT)	Decreasing adjustment value	For decreasing adjustment value
SET	Shifting layers	For shifting to lower or upper layer
INPUT ∗	Switching inputs	For switching the input to ∗
STANDBY/ON	POWER OFF	For turning off the power
FACTORY	Service/Factory OFF	For setting Service/Factory mode to OFF
MENU	Service/Factory OFF	For setting Service/Factory mode to OFF
POINT ZOOM	Matrix change	RGB →YCBR (Component1) → YPBR (Component2)
SPLIT	Main screen/Sub screen change	MAIN → SUB

Main-item indications

Four parameters are displayed:



1 Input function

When there is not a video card

Input Functions	On-Screen Display
IN1, IN2	IN1, IN2

When there is a video card

Input Functions	On-Screen Display
IN1 to IN5	IN1 to IN5

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

When there is not a video card

Color System and Signal Type	On-Screen Display
RGB	RGB
Digital video signal	DIG

When there is a video card

Color System and Signal Type		On-Screen Display
NTSC	Composite input/ S-connector input	NTV/NTS
PAL		PLV/PLS
SECAM		SCV/SCS
4.43NTSC		4NV/4NS
PAL M		PMV/PMS
PAL N		PNV/PNS
BLACK/WHITE		BWV/BWS
Y / Cb / Cr		CBR
Y / Pb / Pr		PBR
RGB		RGB
Digital video signal		DIG

4 Option (Destination, etc.)

Options	On-Screen Display
CMX/MXE	4MX

● SIG-Mode Table

The signal mode is displayed in three characters:

First character: Resolution of the input signal (numerics for the video signals, and alphabetics for the PC signals)
Second character: Grouping of the vertical frequencies

2nd Character	Reference Vertical Frequency	Area	Remarks
–	–	– 20.0	No signal
B		20.0 to 28.0	
C		28.0 to 45.0	
1	50	45.0 to 54.5	
2	56	54.5 to 58.2	
3	60	58.2 to 63.0	
4	66	63.0 to 68.0	
5	70	68.0 to 73.4	
6	For interpolation of 72-Hz	73.4 to 73.9	For distinguishing between 70-Hz or 75-Hz area
7	75	73.9 to 80.0	
8	85	80.0 to 88.5	
?	–	91.5 –	Out of range

Third character: Selection of the screen size by the user is displayed.
(○: available, ×: not available)

3rd Character	Description on GUI	VIDEO	PC
0	DOT BY DOT	×	○
1	4 : 3	○	○
2	FULL (FULL1080i)	○	○
3	ZOOM	○	×
4	WIDE	○	×
6	CINEMA	○	×
8	FULL (FULL1035i)	○	×
9 *	UNDERSCAN	○	×
:	PARTIAL	×	○

*** This is displayed only when UNDERSCAN has been set before Service/Factory mode is entered.**
In Service/Factory mode, changing from other screen sizes to UNDERSCAN cannot be performed.

● SIG-Mode Table

SIG-Mode table for video signals

SIG-Mode	Signal Type	Vertical Freq. fv (Hz)	Horizontal Freq. fh (kHz)	Dot Clock (MHz)	Remarks
13*	SDTV • 525i	60.000	15.734	13.5	
21*	SDTV • 625i	50.000	15.625	13.5	
33*	SDTV • 525p	60.000	31.469	27.000	
41*	HDTV • 1125i	50.000	28.125	74.250	
43*		60.000	33.750	74.250	
51*	SDTV • 625p	50.000	31.250	27.000	
61*	HDTV • 750p	50.000	37.500	74.250	
63*		60.000	45.000	74.250	
7B*	HDTV • 1125p	25.000	28.125	74.250	Use as OUT OF RANGE
7C*		30.000	33.750	74.250	Use as OUT OF RANGE
71*		50.000	56.250	148.500	
73*		60.000	67.500	148.500	
81*	HDTV • 1250p	50.000	62.500	148.500	
91*	288p	50.000	15.625	27.0/54.0	Use as OUT OF RANGE
93*	288p	60.000	15.750	27.0/54.0	Use as OUT OF RANGE

***: Represents the current screen-size selected.**

SIG-Mode table for PC signals

SIG-Mode	Signal Type	Vertical Freq. fv (Hz)	Horizontal Freq. fh (kHz)	Dot Clock (MHz)	Remarks
A2*	640 × 400	56.422	24.825	21.052	Former 720 × 400
A5*	720 × 400	70.087	31.469	28.322	Former 640 × 400
A8*	720 × 400	85.050	37.861	35.438	New
B1*	640 × 480	49.673	24.688	19.750	640 × 480 For rescan (48/50Hz)
B3*		59.940	31.469	25.175	
B4*		66.666	35.000	30.240	
B6*		72.809	37.861	31.500	
B7*		75.000	37.500	31.500	
B8*		85.000	43.300	36.000	
C1*	848 × 480	49.540	24.621	26.000	848 × 480 For rescan (48/50Hz)
C3*		60.000	31.020	33.750	
D2*	800 × 600	56.250	35.158	36.000	
D3*		60.317	37.879	40.000	
D6*		72.188	48.077	50.000	
D7*		75.000	46.875	49.500	
D8*		85.061	53.674	56.250	
E7*	832 × 624	74.550	49.725	57.283	
F1*	1024 × 768	48.003	38.690	52.000	1024 × 768 For rescan (48/50Hz)
F3*		60.004	48.363	65.000	
F5*		70.069	56.476	75.000	
F7*		75.029	60.023	78.750	
F8*		84.997	68.677	94.500	
G1*	1280 × 768	48.014	38.507	65.000	1280 × 768 For rescan (48/50Hz)
G2*		56.250	45.113	76.150	
G3*		59.870	47.776	79.500	
G5*		69.843	56.014	95.000	
H3*	1152 × 864	60.000	53.700	79.369	
H6*		72.000	64.900	99.686	
H7*		75.000	67.500	108.000	
I7*	1152 × 870	75.061	68.681	100.300	
J4*	1152 × 900	65.950	61.800	92.940	
J7*		76.050	71.710	105.561	
K3*	1280 × 960	60.000	60.000	108.000	
L3*	1280 × 1024	60.020	63.981	108.000	
L7*		75.025	79.976	135.000	
L8*		85.024	91.146	157.500	
M3*	1400 × 1050	59.978	65.317	121.750	
M7*	1400 × 1050	74.867	82.278	156.000	
M8*	1400 × 1050	84.960	93.881	(179.500)	
N3*	1600 × 1200	60.000	75.000	162.000	
N4*		65.000	81.250	153.563	
N5*		70.000	87.500	153.563	
N7*		75.000	93.750	151.875	
N8*		85.000	106.250	157.781	
O3*	1280 × 720	59.943	44.718	74.410	

*** : Represents the current screen-size selected.**

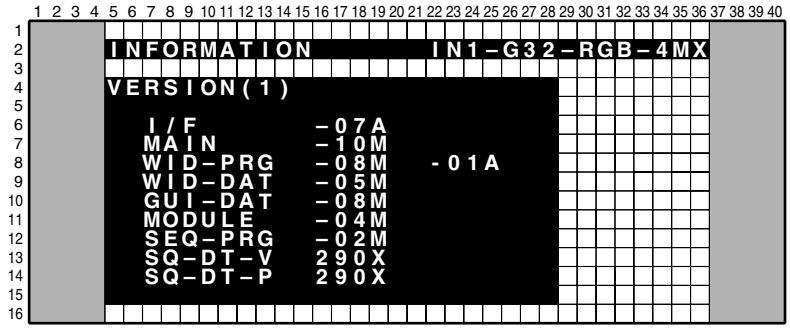
INFORMATION mode

Select the main item "INFORMATION" using the MUTE key then select the subitems shown in the table below using the ▲ or ▼ key.

● Operation items

No.	Function / Display	Content	232C Command
1	VERSION (1)	The flash memory versions for each device are displayed (1)	GS1
2	VERSION (2)	The type of video card inserted in the slot is displayed:	
3	SERIAL	For displaying the serial number of the product	GNP/ GST
4	PANEL PD	Power-down and its time of occurrence are displayed. The values can be cleared.	GPD
5	PANEL SD	Shutdown and its time of occurrence are displayed. The values can be cleared.	GNG
6	TEMPERATURE	Information on temperature is displayed.	GS2/GST
7	HOUR METER	Cumulative power-on time is displayed. The value can be cleared.	GS2
8	PULSE METER	The pulse meter values at each block are displayed. The values can be cleared.	GPM
9	P ON COUNTER	The number of times the power was turned on is displayed. The value can be cleared.	GPC
10	BACKUP EEPROM	The status of the backup data for the module microcomputer is displayed and updated.	GS2

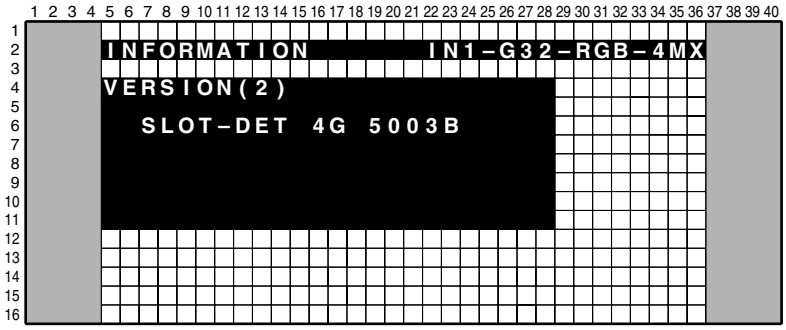
1. VERSION (1)



The flash memory versions for each device are displayed.

On-Screen Display	Flash memory of Device
I / F	User IF microcomputer
MAIN	Main microcomputer
WID–PRG	Program for IC3, Boot program for IC3
WID–DAT	Extension Engin data for IC3
GUI-PRG	GUI data for IC3
MODULE	Module microcomputer
SEQ–PRG	Program for IC4
SQ–DT–V	Sequence data for IC4 (for VIDEO)
SQ–DT–P	Sequence data for IC4 (for PC)

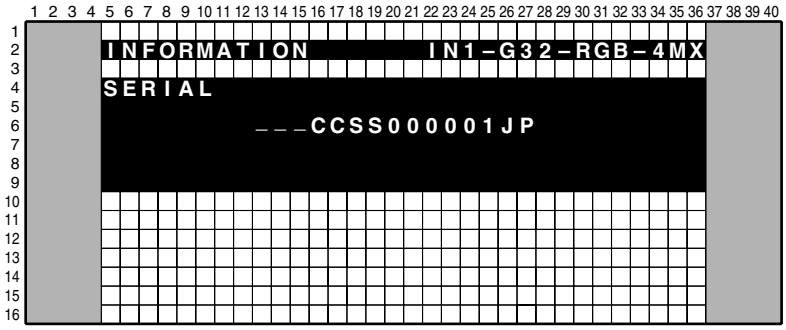
2. VERSION (2)



The type of video card inserted in the slot is displayed:

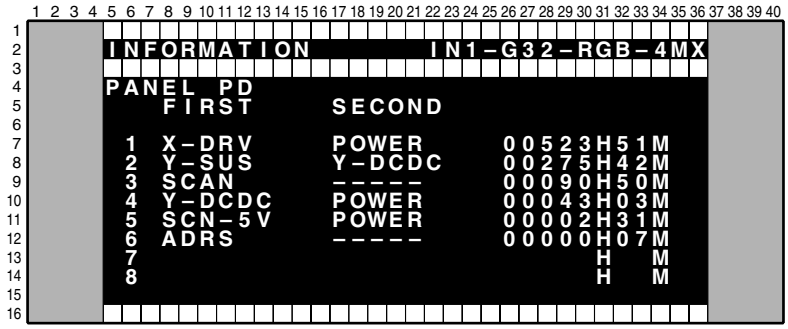
Device	Name Indication	Type of video card	Remarks
SLOT-DET	SLOT-DET	(No indication)	No card inserted
		4G 5003B	When the Pioneer PDA-5003 Standard Video Card is inserted.
		4G 5004R	When the Pioneer PDA-5004 Standard Video Card is inserted.
		3G TYPE ∗	When a PDP-503CMX-based OEM video card is inserted ∗ = A to H
		4G TYPE ∗	When a PDP-504CMX-based OEM video card is inserted ∗ = A to J

3. SERIAL



The serial number of the product is displayed.

4. PANEL PD



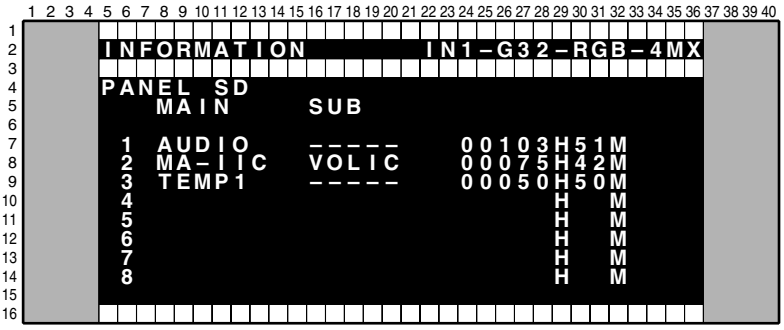
The log of the past eight power-downs is displayed. Power-down points (first and second) and the hour meter value when the power-down was generated are displayed, with the latest power-down data at the top.
The meanings of indications for power-down points are shown in the table below.

• Power-down information

Type of Power-down	On-Screen Display	Type of Power-down	On-Screen Display
No corresponding item	- - - - -	Power-down of the Y-SUS system	Y-SUS
Power-down of the main power supply system	POWER	Power-down of the address system	ADRS
Power-down of the scanning system	SCAN	Power-down of the X-DRIVE circuitry	X-DRV
Power-down in the path between the scanning system and 5-V power supply	SCN-5V	Power-down of the X-DC/DC converter	X-DCDC
Power-down of the Y-Drive system	Y-DRV	Power-down of the X-SUS system	X-SUS
Power-down of the Y-DC/DC converter	Y-DCDC	Power-down of the driving IC power supply system	D-DCDC
PD which cannot be specified	UNKNOWN		

*1: If an activated protection circuit could not be identified after the power-down, it is treated as an unidentifiable power-down (UNKNOWN).

5. PANEL SD



The log of the past eight shutdowns is displayed. Shutdown points and the hour meter value when the shutdown was generated are displayed, with the latest shutdown data at the top.
The meanings of indications for shutdown points are shown in the table below.

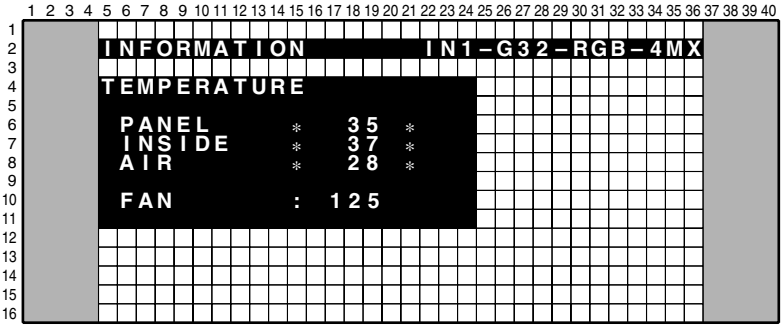
• Panel shutdown information

No.	Type of Shutdown	On-Screen Display (MAIN)	Subcategory
1	Abnormality in IC4 communication	IC4	
2	Abnormality in module microcomputer IIC communication	MD-IIC	Exists.
3	DIGITAL-DCDC power decrease	RST2	
4	Abnormality in panel temperature	TEMP1	
5	Short-circuiting of the speakers	AUDIO	
6	Abnormality in module microcomputer communication	MODULE	
7	Abnormality in three-wire serial communication of the main microcomputer	MA-SRL	Exists.
8	Abnormality in main microcomputer IIC communication	MA-IIC	Exists.
9	Abnormality in main microcomputer communication	MAIN	
10	FAN stopped	FAN	
11	Abnormality in unit temperature	TEMP	Exists.
12	Abnormality in the ASIC power on the main microcomputer side	M-DCDC	
13	Other failures	ETC	Exists.

• Subcategory information

No.	Type of Shutdown	Subcategory
2	MD-IIC	EEPROM4K, EROM2K
7	MA-SRL	IF microcomputer, IC2, IC3
8	MA-IIC	MA-EEP, IC1-V, IC1-Y, AD-M, AD-S, SL-EEP, IC6/1, IC6/2, VOLIC
11	TEMP	INSIDE/AIR (INSIDE = TEMP2/AIR =TEMP3)
13	ETC	RLS, VCC-D1, VCC-D2

6. TEMPERATURE

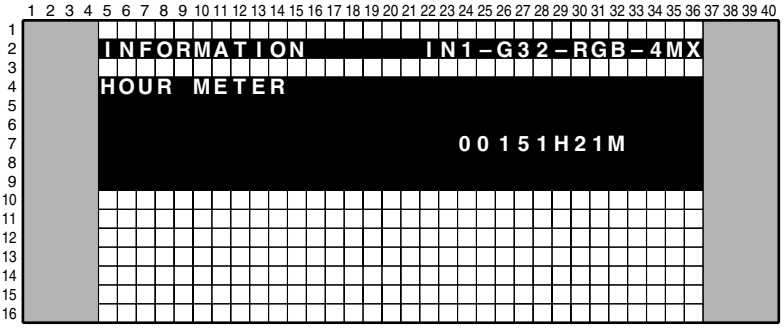


Data from each temperature sensor and the fan output value are displayed:

- Temperature sensors [°C]
  PANEL: Sensor temperature of a panel part (Reference value)
  INSIDE: Temperature inside the unit (Reference value)
  AIR: Ambient temperature around the unit (Reference value)
- Fan output: Fan output data

To update the temperature values or fan output data, use the [◄] or [►] key.

7. HOUR METER

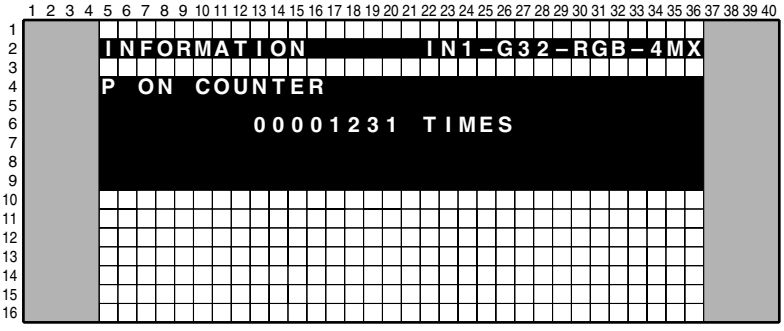


The cumulative power-on time is displayed.

8. PULSE METER

The cumulative number of pulses is displayed.

9. P ON COUNTER

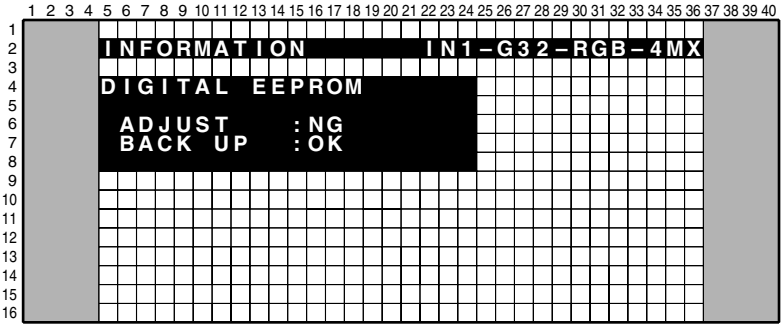


The cumulative number of times the unit was turned on is displayed.

10. BACKUP EEPROM

When the DIGITAL VIDEO Assy is to be replaced, the adjustment values in it are temporarily stored in the backup ROM then are written on the new Assy after replacement.

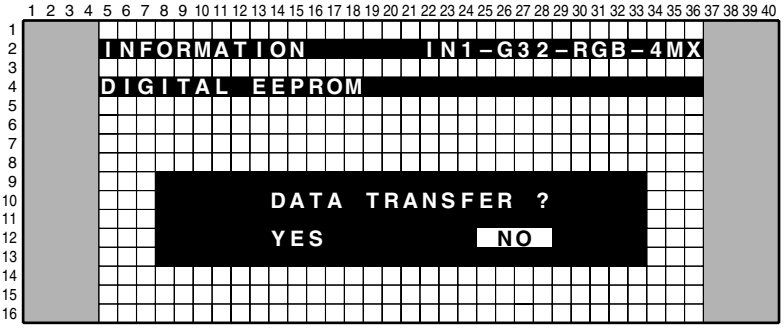
① Check if adjustment has been made on the DIGITAL VIDEO Assy or not (i.e., in the state of a new service part), and if the data on any adjustment values are retained in the backup ROM or not.



- ADJUST: OK (DIGITAL VIDEO Assy adjusted)
  NG (DIGITAL VIDEO Assy not adjusted)
- BACKUP: OK (Adjustment data retained in the backup ROM)
  NG (Adjustment data not retained in the backup ROM)

② Downloading the data for the DIGITAL VIDEO Assy from the backup ROM

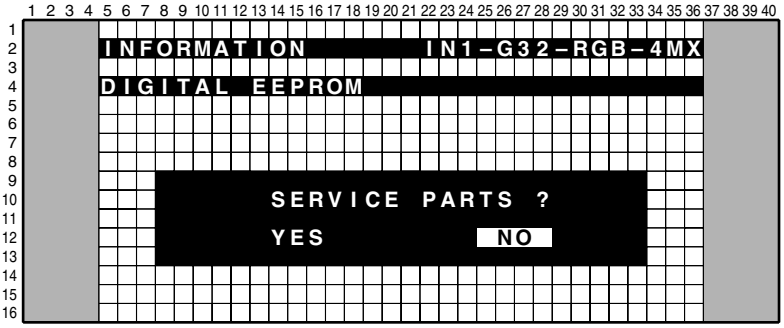
- Press the SET key while display ① above is displayed, and the following display will appear.



- Move the cursor to YES and press the SET key.
  The data in the backup ROM are copy to the DIGITAL VIDEO Assy.
  (When a new DIGITAL VIDEO Assy has been mounted, it now has the adjustment data suited for the panel.)
- Move the cursor to NO, and press the SET key.
  Copy of the data to the DIGITAL VIDEO Assy will not be executed.

③ Clearing the data in the ROM of the DIGITAL VIDEO Assy

- When YES or NO is selected while display ② above is displayed, the following display will appear.



- Move the cursor to YES and press the SET key.
  The data in the ROM of the DIGITAL VIDEO Assy are cleared, and the Assy has no specific adjustment data.
- Move the cursor to NO and press the SET key. The data in the ROM of the DIGITAL VIDEO Assy are not cleared.
  When YES selected on display ② and the data were copy, select NO on this display.

Note: When YES or NO is selected on display ③ above, the display returns to that of ① above.

Adjustment of corresponding route unevenness

Basically, only replacement of service parts is required, and adjustment is not required.

No.	Command	Adjustment Parameter Name in Factory	Function
1	VSG	CVY GAIN	IC1 MAIN GAIN adjustment (switching routes with the SWM [main] and SWS [sub] commands)
2	VSO	CVY OFFSET	IC1 MAIN OFFSET adjustment (switching routes with the SWM [main] and SWS [sub] commands)
3	RYG	RY GAIN	AD R GAIN adjustment (correction in differences between component- and RGB-system signals)
4	GYG	GY GAIN	AD G GAIN adjustment (correction in differences between component- and RGB-system signals)
5	BYG	BY GAIN	AD B GAIN adjustment (correction in differences between component- and RGB-system signals)
6	ADC	AD MAIN GAIN	AD MAIN RGB GAIN adjustment (for main screen)
7	MRG	AD MAIN RY GAIN	AD MAIN RY GAIN adjustment (for main screen)
8	MGG	AD MAIN GY GAIN	AD MAIN GY GAIN adjustment (for main screen)
9	MBG	AD MAIN BY GAIN	AD MAIN BY GAIN adjustment (for main screen)
10	MRO	AD MAIN RY OFS	AD MAIN RY OFFSET adjustment (for main screen)
11	MGO	AD MAIN GY OFS	AD MAIN GY OFFSET adjustment (for main screen)
12	MBO	AD MAIN BY OFS	AD MAIN BY OFFSET adjustment (for main screen)
13	SRG	AD SUB RY GAIN	AD SUB RY GAIN adjustment (for sub screen)
14	SGG	AD SUB GY GAIN	AD SUB GY GAIN adjustment (for sub screen)
15	SBG	AD SUB BY GAIN	AD SUB BY GAIN adjustment (for sub screen)
16	SRO	AD SUB RY OFS	AD SUB RY OFFSET adjustment (for sub screen)
17	SGO	AD SUB GY OFS	AD SUB GY OFFSET adjustment (for sub screen)
18	SBO	AD SUB BY OFS	AD SUB BY OFFSET adjustment (for sub screen)

Reference: Commands for adjustment of differences in signals and memory cells used for storing adjustment values

• Basically no adjustment is required for the Service Assy, as it is properly adjusted before shipment.

Adjustment values to be stored in the EEPROM of the AV I/O (INDIVIDUAL mode)

Adjustment values differ depending on the input function, input signal format, and main/sub screen.

Input and Signal Format	Commands for Adjustment	
	Route for the Main Screen	Route for the Sub Screen
INPUT1 (RGB)	RYG GYG BYG	RYG GYG BYG
INPUT1 (Color difference)	RYG GYG BYG	RYG GYG BYG

- Four adjustment tables are provided here, depending on the input function, input signal format, and main/sub screen.
- No adjustment is required for INPUT 2, which is of DVI (digital video interface) standards.

Adjustment values to be stored in the EEPROM of the PDA-5003 or PDA-5004

Adjustment values differ depending on the input function and main/sub screen.

Input and Signal Format	Commands for Adjustment	
	Route for the Main Screen	Route for the Sub Screen
INPUT3 (Y/C)	VSG VSO	RYG GYG BYG
INPUT4 (Comp. V)	VSG VSO	RYG GYG BYG
INPUT5 (Y/C)	RYG GYG BYG	RYG GYG BYG
INPUT5 (Color difference)	RYG GYG BYG	RYG GYG BYG

- Eight adjustment tables are provided here, depending on the input function and main/sub screen.

Adjustment values to be stored in the EEPROM of the RGB (COMMON mode)

Adjustment values differ depending on the signal resolution, input signal format, and main/sub screen.

Note: No adjustment is required for DVI input or signals converted to digital signals by IC1.

[Main adjustment 1]

Main A/D adjustments for R, G, and B individually (COMMON-RGB mode)

Input and Signal Format	Commands for Adjustment		Conditions for the Tables to be Switched
525i (RGB)	MRG MGG MBG	MRO MGO MBO	Video RGB signals (excl. 1125p signals)
525i (Color difference)	MRG MGG MBG	MRO MGO MBO	Video color-difference signals (excl. 1125p signals)
1080p (RGB)	MRG MGG MBG	MRO MGO MBO	All PC signals and 1125p RGB signals
1080p (Color difference)	MRG MGG MBG	MRO MGO MBO	1125p color-difference signals

- For adjustment according to the above tables, input corresponding signals to INPUT 5 to change the RGB/color-difference signal setting then perform adjustment.
- Four adjustment tables are provided here, depending on the signal resolution, input signal format, and main/sub screen.

[Sub adjustment 1]

Main A/D adjustments for R, G, and B individually (COMMON-RGB 1 mode)

Input and Signal Format	Commands for Adjustment		Conditions for the Tables to be Switched
RGB	SRG SGG SBG	SRO SGO SBO	All R, G, and B signals
Color difference	SRG SGG SBG	SRO SGO SBO	All color-difference signals

- For adjustment according to the above tables, input video signals to INPUT 5 to switch to the route for sub input and to change the RGB/color-difference signal setting then perform adjustment.
- Two adjustment tables are provided here, depending on the signal format.

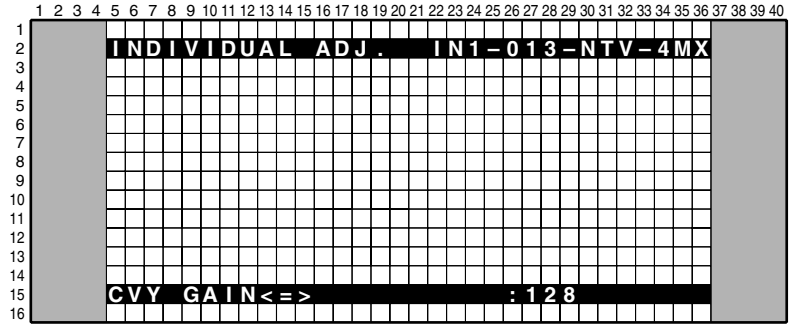
[Main adjustment 2]

Main A/D adjustments for all R, G, and B simultaneously (COMMON-RGB 2 mode)

Input and Signal Format	Commands for Adjustment	Conditions for the Tables to be Switched
RGB	ADC	All R, G, and B signals
Color difference	ADC	All color-difference signals

- For adjustment according to the above tables, input video signals to INPUT 5 to switch to the route for main input and to change the RGB/color-difference signal setting then perform adjustment.
- A contrast gain commits this adjustment command simultaneously three colors.
- Two adjustment tables are provided here, depending on the signal format.

INDIVIDUAL ADJ. mode



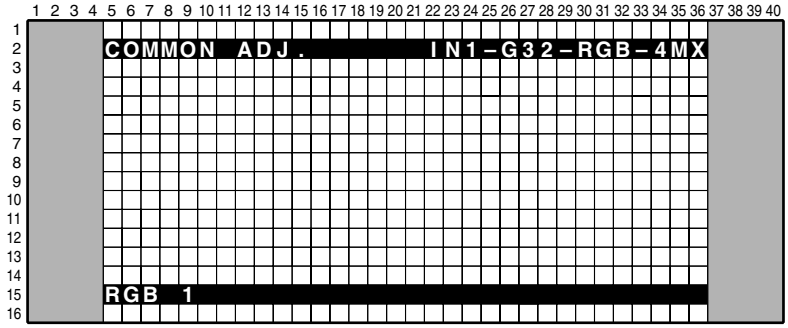
Each time the ▲ or ▼ key is pressed, the individual adjustment items are changed, as follows:

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range	Remarks
1	VSG	CVY GAIN<=> : ***	IC6255 Input GAIN adj.	064 to 191	Select a route with the command SWM (main) and the command SWS (sub).
2	VSO	CVY OFFSET<=> : ***	IC6255 Input OFFSET adj.	064 to 191	
3	RYG	RY GAIN<=> : ***	AD (IC6001 or IC6602) R input GAIN adj.	000 to 255	The memory tables for the RGB and component systems are separate, and are switchable with the command MCD.
4	GYG	GY GAIN<=> : ***	AD (IC6001 or IC6602) G input GAIN adj.	000 to 255	
5	BYG	BY GAIN<=> : ***	AD (IC6001 or IC6602) B input GAIN adj.	000 to 255	

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

Note: The differences in signals for the main and sublevel screens from the AV/IO Assy are compensated, and the compensation data are stored in the EEPROM (IC8705) for each screen.

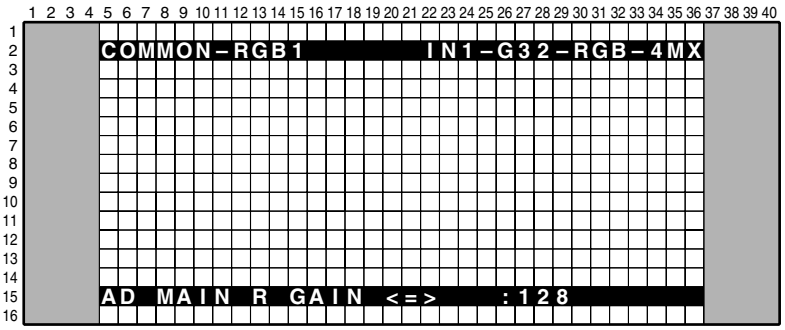
COMMON ADJ. mode



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:
- RGB1(+) : Adjustment of a video card and the RGB Assy
- RGB2(+) : Adjustment of the RGB Assy
- PANEL1(+) : Adjustment items related to the drive (common to the unit)
- PANEL2(+) : Adjustment items related to the drive (dependent on signals)

Each time the SET key is pressed, items grouped under the subitem are selected one by one.

1. COMMON-RGB1



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:

When the main input is selected

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range	Remarks
1	MRG	AD MAIN R GAIN <=> : ***	AD (IC6001) MAIN R GAIN adj. (for main screen)	000 to 255	
2	MGG	AD MAIN G GAIN <=> : ***	AD (IC6001) MAIN G GAIN adj. (for main screen)	000 to 255	
3	MBG	AD MAIN B GAIN <=> : ***	AD (IC6001) MAIN B GAIN adj. (for main screen)	000 to 255	
4	MRO	AD MAIN R OFFSET <=> : ***	AD (IC6001) MAIN R OFFSET adj. (for main screen)	000 to 255	
5	MGO	AD MAIN G OFFSET <=> : ***	AD (IC6001) MAIN G OFFSET adj. (for main screen)	000 to 255	
6	MBO	AD MAIN B OFFSET <=> : ***	AD (IC6001) MAIN B OFFSET adj. (for main screen)	000 to 255	

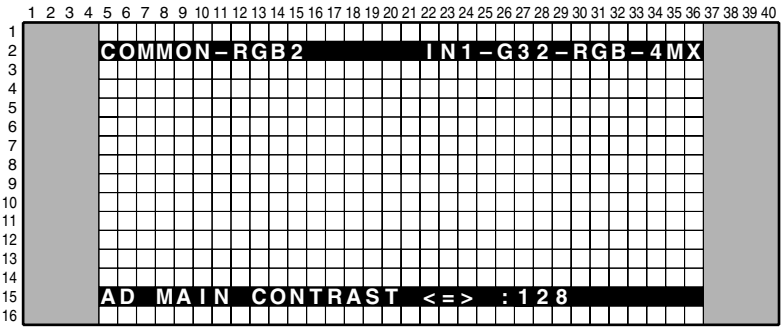
When the sub input is selected

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range	Remarks
1	SRG	AD SUB R GAIN <=> : ***	AD (IC6602) SUB R GAIN adj. (for sub screen)	000 to 255	
2	SGG	AD SUB G GAIN <=> : ***	AD (IC6602) SUB G GAIN adj. (for sub screen)	000 to 255	
3	SBG	AD SUB B GAIN <=> : ***	AD (IC6602) SUB B GAIN adj. (for sub screen)	000 to 255	
4	SRO	AD SUB R OFFSET <=> : ***	AD (IC6602) SUB R OFFSET adj. (for sub screen)	064 to 191	
5	SGO	AD SUB G OFFSET <=> : ***	AD (IC6602) SUB G OFFSET adj. (for sub screen)	064 to 191	
6	SBO	AD SUB B OFFSET <=> : ***	AD (IC6602) SUB B OFFSET adj. (for sub screen)	064 to 191	

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

Note: The differences in signals for the main and sublevel screens from the RGB Assy are compensated, and the compensation data are stored in the EEPROM (IC7205) for each screen.

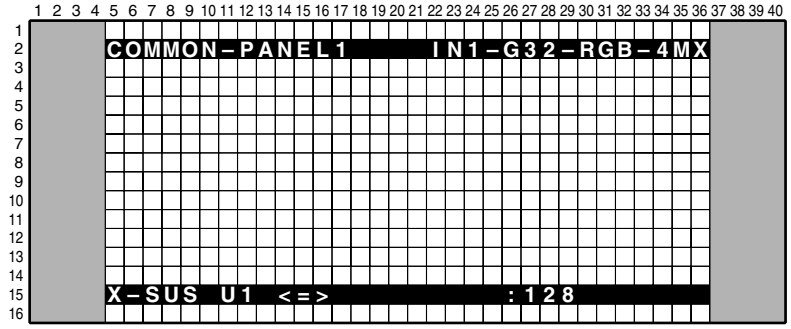
2. COMMON-RGB 2



No.	Corresponding 232C Command	Function/Display	Content	Adjustable range	Remarks
1	ADC	AD MAIN CONTRAST<=> : ***	AD (IC6001) MAIN RGB GAIN adj. (for main screen)	000 to 255	

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

3. COMMON-PANEL1



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:

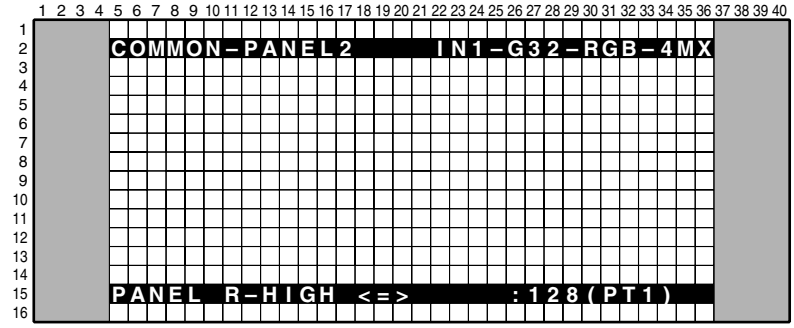
No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range
1	XU1	X-SUS U1 <=> : ***	Adjustment of X-SUS leading edge pulse U1	124 to 132
2	XU2	X-SUS U2 <=> : ***	Adjustment of X-SUS leading edge pulse U2	124 to 132
3	XD1	X-SUS D1 <=> : ***	Adjustment of X-SUS trailing edge pulse D1	124 to 132
4	XD2	X-SUS D2 <=> : ***	Adjustment of X-SUS trailing edge pulse D2	124 to 132
5	YU1	Y-SUS U1 <=> : ***	Adjustment of Y-SUS leading edge pulse U1	124 to 132
6	YU2	Y-SUS U2 <=> : ***	Adjustment of Y-SUS leading edge pulse U2	124 to 132
7	YD1	Y-SUS D1 <=> : ***	Adjustment of Y-SUS trailing edge pulse D1	124 to 132
8	YD2	Y-SUS D2 <=> : ***	Adjustment of Y-SUS trailing edge pulse D2	124 to 132
9	YD3	Y-SUS D3 <=> : ***	Adjustment of X-SUS trailing edge pulse D3	124 to 132
10	YD4	Y-SUS D4 <=> : ***	Adjustment of X-SUS trailing edge pulse D4	124 to 132
11	VSU	VLT-SUS <=> : ***	SUS voltage adjustment	000 to 255
12	VOF	VLT-OFS <=> : ***	OFFSET voltage adjustment	000 to 255

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

Notes:

- Adjustments No. 1 to No. 10 above are not normally required, unless so instructed by Service Information, etc.
- Readjustment of values for No. 11 [VSU] and No. 12 [VOF] are required when the service panel is replaced.

4. COMMON-PANEL2



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range
1	PRH	PANEL R HIGH <=> : *** (PTO)	Panel W/B R-HIGH adjustment	000 to 511
2	PGH	PANEL G HIGH <=> : *** (PTO)	Panel W/B G-HIGH adjustment	000 to 511
3	PBH	PANEL B HIGH <=> : *** (PTO)	Panel W/B B-HIGH adjustment	000 to 511
4	PRL	PANEL R LOW <=> : *** (PTO)	Panel W/B R-LOW adjustment	000 to 999
5	PGL	PANEL G LOW <=> : *** (PTO)	Panel W/B G-LOW adjustment	000 to 999
6	PBL	PANEL B LOW <=> : *** (PTO)	Panel W/B B-LOW adjustment	000 to 999
7	ABL	ABL LEVEL <=> : *** (ABx)	Power consumption adjustment	000 to 999

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.
White balance adjustment.(From No.1 to No.6). (Refer to 116 pages of the " [W/B-adjustment procedurs]")

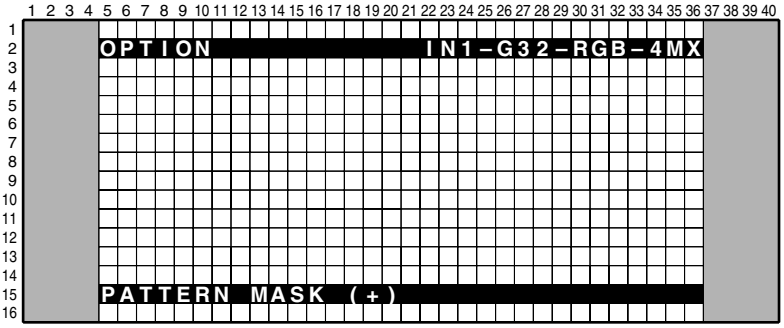
Notes: Adjustments No. 7: [ABL] above are not normally required, unless so instructed by Service Information, etc.

"(PTO)" and "(ABx)" in the table above represent the following:

Indication	Table
PT1	For PC and NTSC
PT2	For PAL, For PC (48Hz)

Indication	Table
AB1	For 60Hz and 75Hz video
AB2	For 50Hz video, For 48Hz PC
AB3	For PC

OPTION mode



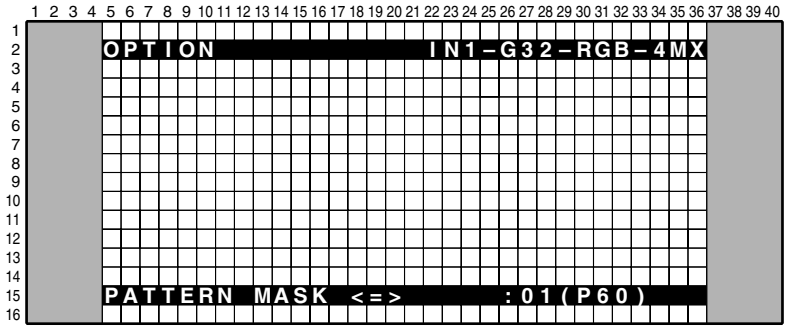
Select the main item "OPTION" using the MUTE key then select the subitems shown in the table below using the ▲ or ▼ key.

No.	Function/Display	Content	Remarks
1	PATTERN MASK (+)	For selecting Pattern mask	A lower layer exists.
2	FULL MASK (+)	For selecting raster mask	A lower layer exists.
3	DYNAMIC RANGE	ON ⇔ OFF	The last setting is not stored in memory (initial setting: ON).
4	EDID WRITE MODE	DISABLE ⇔ ENABLE	The last setting is not stored in memory (initial setting: DISABLE).
5	INTEGRATOR MODE	DISABLE ⇔ ENABLE	Initial setting: ENABLE

Note:

- For PATTERN MASK (+) and FULL MASK (+), press the SET key to switch to the lower layer.
- Adjustments No. 3 to 5 above are not required for servicing.

1. PATTERN MASK
2. FULL MASK



To select the mask frequency, use the ◄ or ► key.
To select the mask pattern, use the ▲ or ▼ key.

Mask Frequency

No.	Corresponding RS-232C Command	Function/ Display	Content
1	F48	V48	Video 48-Hz sequence
2	F50	V50	Video 50-Hz sequence
3	F60	V60 (initial value)	Video 60-Hz sequence
4	F61	P60	PC 60-Hz sequence
5	F70	P70	PC 70-Hz sequence
6	F72	V72	Video 72-Hz sequence
7	F75	V75	Video 75-Hz sequence

Pattern Mask

No.	Corresponding RS-232C Command	Function/ Display	Content
1	M00	OFF	Mask mode: OFF
2	M01	01	White 0 to 100%
3	M02	02	Aging mask
4	M03	03	Aging mask (detection of still picture: OFF)
5	M10	10	H RAMP1
6	M11	11	H RAMP2
7	M12	12	H RAMP3
8	M13	13	H RAMP4
9	M14	14	V RAMP
10	M15	15	H/V RAMP
11	M20	20	Window0
12	M21	21	Window1
13	M22	22	Window2
14	M23	23	Window3
15	M24	24	Window4
16	M25	25	Window5
17	M26	26	Window6
18	M27	27	Window7
19	M28	28	Window8
20	M29	29	Window9
21	M2E	2E	Wiper for erasing afterimage
22	M30	30	COLOR BAR
23	M31	31	Slanted lines

Full Mask

No.	Corresponding RS-232C Command	Function/ Display	Content
1	M00	OFF	Mask mode: OFF
2	M51	51	Raster – White
3	M52	52	Raster – Red
4	M53	53	Raster – Green
5	M54	54	Raster – Blue
6	M55	55	Raster – Black
7	M56	56	Raster – Cyan
8	M57	57	Raster – Mazenta
9	M58	58	Raster – Yellow
10	M59	59	Raster – Cyan 274
11	M60	60	Raster – 50 fresh color
12	M61	61	Raster – 50 purple
13	M62	62	Raster – 50 sky blue
14	M63	63	Raster – Red 779
15	M64	64	Raster – Cyan 218
16	M65	65	Raster – Cyan 448
17	M66	66	Raster – 43 fresh color
18	M67	67	Raster – Red 640
19	M68	68	Raster – Mazenta 98
20	M69	69	Raster – 43 sky blue 1
21	M70	70	Raster – 43 sky blue 2
22	M71	71	Raster – 43 purple
23	M72	72	Raster – Blue 960
24	M73	73	Raster – Yellow 512
25	M74	74	Raster – Gray 512

3. DYNAMIC RANGE

The setting can be changed using the ◄ or ► key.

No.	Corresponding RS-232C Command	Function/ Display	Content
1	DYY	ON	DYNAMIC RANGE correction: ON (initial setting)
2	DYN	OFF	DYNAMIC RANGE correction: OFF

4. EDID WRITE MODE

The setting can be changed using the ◄ or ► key.

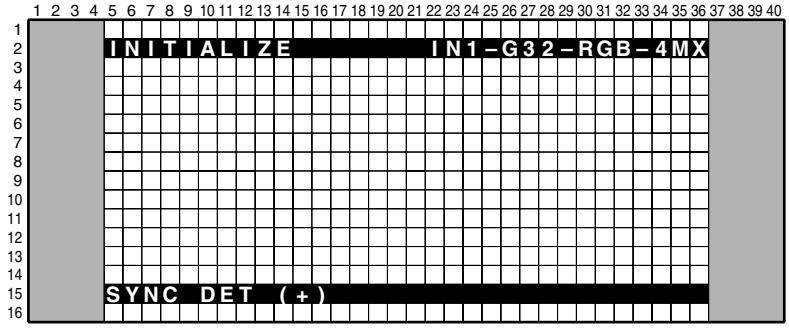
No.	Corresponding RS-232C Command	Function/ Display	Content
1	EWN	DISABLE	Prohibiting writing EDID data (initial setting)
2	EWY	ENABLE	Enabling writing EDID data

5. INTEGRATOR MODE

The setting can be changed using the ◄ or ► key.

No.	Corresponding RS-232C Command	Function/ Display	Content
1	–	ENABLE	Permitting INTEGRATOR MODE (initial setting)
2	–	DISABLE	Prohibiting INTEGRATOR MODE

INITIALIZE mode

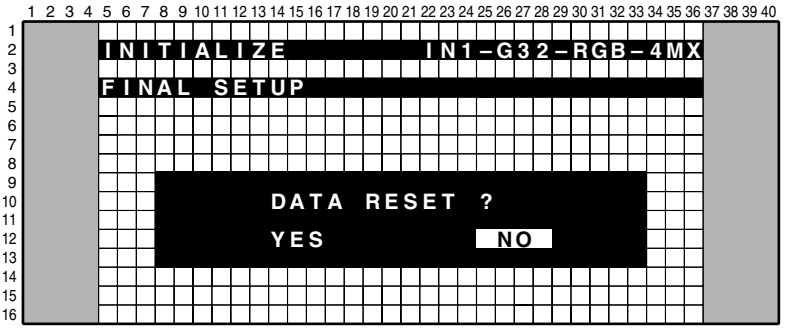


The subitems can be changed using the ▲ or ▼ key.

No.	Corresponding RS-232C Command	Function/Display	Content
1	–	SYNC DET (+)	(Not used)
2	–	DRIVE MODE (+)	(Not used)
3	–	SIDE MASK LEVEL (+)	(Not used)
4	–	PANEL REVICE (+)	(Not used)
5	FST	FINAL SETUP	For initializing user's settings and some factory settings
6	–	C TEMP LOW (+)	For adjusting the user's C TEMP MODE item selected
7	–	C TEMP MID LOW (+)	
8	–	C TEMP STD (+)	
9	–	C TEMP MID HIGH (+)	
10	–	C TEMP HIGH (+)	
11	–	C TEMP MODE2 (+)	(Not used)
12	–	SLOT PROTECT<=>	For setting permission/prohibition of SLOT

Note: Any item followed by (+) has a lower layer to which you can switch using the SET key.

1. FINAL SETUP



Select YES or NO using the ◄ or ► key then press the SET key for finalizing the selection:
YES : For executing FINAL SETUP
NO : For not executing FINAL SETUP

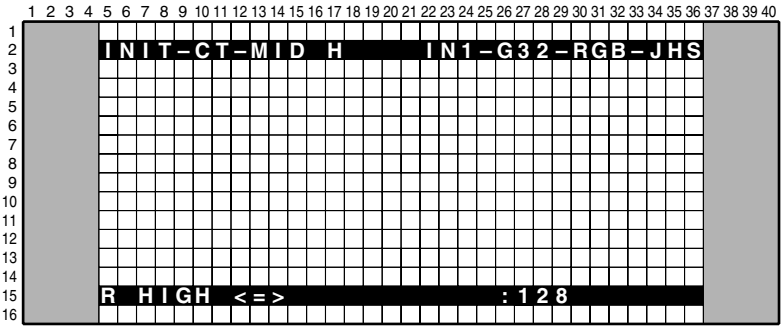
In FINAL SETUP, the following items can be initialized:

	Item (operation)	Factory setting	Remarks
Normal	Input function (main)	INPUT1	
	Input function (sub)	INPUT2	
	Screen size	VIDEO WIDE or FULL	The screen-size setting will be one of the factory-preset values, based on the results of signal-type detection (SIG-MODE).
		PC DOT BY DOT or FULL or 4:3 or PARTIAL	
	Volume	0	
	Multi screen	OFF	
	FUNCTIONAL LOCK	LOCK OFF	
Menu setting	PICTURE	Default setting for all adjustment items	For each input function
	SCREEN	Default setting for all adjustment items	For each input function
	POWER MANAGEMENT	OFF	For each input function
	AUTO POWER OFF	DISABLE	For each input function
	COLOR TEMP.	MIDDLE	For each input function
	DNR	MIDDLE	For each input function
	MPEG NR	LOW	For each input function
	CTI	ON	For each input function
	PURECINEMA	OFF	For each input function
	COLOR DECODING	COMPONENT 1 or COMPONENT 2	One of the factory-preset signals is output, based on the results of signal-type detection (SIG-MODE) for the input function.
	CLAMP POSITION	AUTO	For each input function
	COLOR SYSTEM	AUTO	For each input function
	SIGNAL FORMAT	VGA or XGA or SXGA or 720-PC *	One of the factory-preset signals is output, based on the results of signal-type detection (SIG-MODE) for the input function.
	LANGUAGE	ENGLISH	
	ENERGY SAVE	STANDARD	
	SCREEN MGT.	OFF/ 01H00M	
	ORBITER	OFF	
	MASK CONTROL	ON	
	AUTO SET UP MODE	INACTIVE	
	AUTO FUNCTION	OFF	
	AUDIO OUT	FIXED	

* 720-PC selectable only with video card is inserted

	Item (operation)	Factory setting	Remarks
Integrator menu setting	PICTURE	Default setting for all adjustment items	For each input function
	WHITE BAL.	Default setting for all adjustment items	For each input function
	SCREEN	Default setting for all adjustment items	For each input function
	GRADATION	VIDEO DRE MID PC GAMMA 2.0	The screen-size setting will be one of the factory-preset values, based on the results of signal-type detection (SIG-MODE).
	BRT. ENHANCE	OFF	For each input function
	SUB VOLUME	20	For each input function
	SCREEN MGT. SET	00H10M/00H30M/WHITE/ 00H10M/INV.1/1	
	SCREEN MASK	OFF	
	SIDE MASK	NORMAL/80/80/80	
	2x2 MODE	OFF/UP LEFT/NORMAL	
	MIRROR MODE	OFF	
	BAUD RATE	9600BPS	
	ID NO. SET	– –	
	OSD	ON	
	FRONT INDICATOR	ON	
	FAN CONTROL	AUTO	
	COLOR MODE	NORMAL	
	PRO USE	OFF/OFF/DISABLE/ MOTION	
	FRC	MODE1	
Factory	PATTERN MASK	OFF	
	FULL MASK	OFF	
	EDIT WRITE MODE	DISABLE	
232C	LOUDNESS	OFF	

2. C TEMP



The indication on the 2nd line in the above display varies according to the subitem selected in the upper layer, as follows:
INIT-CT- ****
****: LOW/MID L/STD/MID H/HIGH/MOD2

Notes: Adjustments are not normally required, unless so instructed by Service Information, etc.

Each time the ▲ or ▼ key is pressed, items grouped under the subitems are changed, as follows:

No.	Function/Display	Content
1	R HIGH <=>	For adjusting R highlight in the selected color temperature mode
2	G HIGH <=>	For adjusting G highlight in the selected color temperature mode
3	B HIGH <=>	For adjusting B highlight in the selected color temperature mode
4	R LOW <=>	For adjusting R lowlight in the selected color temperature mode
5	G LOW <=>	For adjusting G lowlight in the selected color temperature mode
6	B LOW <=>	For adjusting B lowlight in the selected color temperature mode

To change the value of each item, press the ◄ or ► key.

3. SLOT PROTECT

Option No.	Function/ Display	Operation/Control	Result of Distinction			
			PDA-5002	PDA-5003 PDA-5004	3G-TYPE ∗ (∗ A - H)	4G-TYPE ∗ (∗ A - J)
1 (initial setting)	ALL	Permitting all Video card	×	○	○	○
2	P-SLOT	Permitting only the Video card (PDA-5003/ PDA- 5004) made by Pioneer	×	○	×	×

○: Operable according to the setting ×: The corresponding Video card will be treated as an incompatible Video card.

- When a disallowed video card is inserted, the power is not turned on, and the red and green LEDs flash alternatively.
- For details on results of distinction, see "SLOT-DET of the VERSION (2)."

6.4 COMMAND DESCRIPTION

■ About GET Command

● Operation description of GET command

■ Conditions under which GET commands are enabled

Most of the GET commands are enabled at any time, regardless of unit's being on/off or in Factory or Normal mode. However, some GET commands must be issued while the power is on to acquire correct data.

[Operations]
- Reading out and sending various data stored in the EEPROMs and the RAMs of microcomputers
- Adding a received string of command characters at the beginning of reply data as an echoback
- Decimal notation are converted into ASCII numerics and transmitted.
- "CS" represents an ASCII code consisting of two hexadecimal alphanumerics, and the sum of CS +transmission data(excl. STX and ETX) must be 0.

■ Reply data format

	STX	Received command (3byte)	Transmission data	•••	Transmission data	CS (2byte)	ETX
Example:	[02]	GAS	2	•••	0	97	[03]

GST: GET STATUS

Order	Data	Size	Remarks
1	Display data	3 byte	See the table below.
2	Power data	3 byte	See the table below. (The third character is for the subinput.)
3	Input function data (main)	3 byte	Input data during GST reception (INPUTs 1 to 5 are indicated as IN 1-5.)
4	Input function data (sub)	3 byte	Subinput data during GST reception (INPUTs 1 to 5 are indicated as IS 1-5.) (see Note.3)
5	Screen size data	1 byte	See the table below.
6	Two-screen indication	1 byte	0: OFF (Full-screen) 1: 2-SCREEN 2: PinP (Lower right) 3: PinP (Upper right) 4: PinP (Upper left) 5: PinP (Lower left) 6: PoutP
7	FUNCTIONAL LOCK data	1 byte	0: LOCK OFF 1: BUTTONS LOCK 2: IR LOCK 3: IR&BUTTONS LOCK 4: MEMORY LOCK
8	Dummy data	3 byte	(Three-digit figure)
9	Temperature data 2 (TEMP2)	3 byte	°C (∗) (see Note.1)
10	Temperature data 3 (TEMP3)	3 byte	°C (∗) (see Note.1)
11	Serial	15 byte	
12	Dummy data	3 byte	(Three-digit figure)
13	Dummy data	3 byte	
14	HOUR METER data	5 byte	Indicated in hours
15	Dummy data	2 byte	(Checksum)

Display data	1st character 2nd character 3rd character	Data on generation: 4 (Fixation) Data on screen size: 4 (43 inches), 5 (50 inches) Data on destination: M (Fixation)
Power data	1st character 2nd character	Power status and signal status PN (power on & at usually, of signal Input), PL (power on & no input), PO (power on & out of range signal Input), SN (stand by/ on), SW (power management standby), SS (SD and PD standby),
	3rd character	Multi screen features. The sub signal state of a input (see Note. 2) N (at usually, of signal Input), L(no Input), O (out of range in signal Input)
Screen size data	1st character	Numbers used are the same as those that indicate SIG-MODE screen sizes. 0: Dot by Dot PARTIAL, 1: 4:3, 2: FULL or FULL1080i, 3: ZOOM, 4: WIDE, 6: CINEMA, 8: FULL1035i, 9: UNDERSCAN

Not.1: During Standby or immediately after the power is turned on, accurate temperature data cannot be obtained. To obtain an accurate temperature reading, wait for a few minutes after the power is turned on.
Not.2: During Standby or full-screen display, dummy data (symbols) are output.
Not.3: During Standby or full-screen display, values stored in memory of the unit are output.

GS1: Returning information on the model and the version of the software

Order	Data	Size
1	Data on the display	3 byte
2	Version of the module microcomputer	4 byte
3	Version of the IC4-MANTA	4 byte
4	Sequence version (50VIDEO)	4 byte
5	Sequence version (50PC)	4 byte
6	Sequence version (43VIDEO)	4 byte
7	Sequence version (43PC)	4 byte
8	Version of the IF microcomputer	4 byte
9	Version of the main microcomputer	4 byte
10	Version of the IC3-MANTA	4 byte
11	Version of the OSD	4 byte
12	Dummy	12 byte

Breakdown of the data on the display

Data	Model
MX5	PDP-504CMX series
MX4	PDP-434CMX series

GPW: RGB-level-related adjustment values of the panel system

Order	Data	Size
1	Panel W/B table currently used	3 byte
2	Main contrast	4 byte
3	Red high light of the W/B adjustment value	4 byte
4	Green high light of the W/B adjustment value	4 byte
5	Blue high light of the W/B adjustment value	4 byte
6	Main brightness	4 byte
7	Red low light of the W/B adjustment value	4 byte
8	Green low light of the W/B adjustment value	4 byte
9	Blue low light of the W/B adjustment value	4 byte

Data	Table
PT1	WB table for NTSC
PT2	WB table for PAL
PT3	Reserved table

GPD: Power-down information

Order	Data	Size	Order	Data	Size
1	Latest "1st PD" data	1 byte	17	Fifth latest “1st PD” data	1 byte
2	Latest "2nd PD" data	1 byte	18	Fifth latest “2nd PD” data	1 byte
3	Data of hour meter for the latest PD	7 byte	19	Data of hour meter for the fifth latest PD	7 byte
4	Data on temperature for the latest PD (TEMP1)	3 byte	20	Data on temperature for the fifth latest PD (TEMP1)	3 byte
5	Second latest “1st PD” data	1 byte	21	Sixth latest “1st PD” data	1 byte
6	Second latest “2nd PD” data	1 byte	22	Sixth latest “2nd PD” data	1 byte
7	Data of hour meter for the second latest PD	7 byte	23	Data of hour meter for the sixth latest PD	7 byte
8	Data on temperature for the second latest PD (TEMP1)	3 byte	24	Data on temperature for the sixth latest PD (TEMP1)	3 byte
9	Third latest “1st PD” data	1 byte	25	Seventh latest “1st PD” data	1 byte
10	Third latest “2nd PD” data	1 byte	26	Seventh latest “2nd PD” data	1 byte
11	Data of hour meter for the third latest PD	7 byte	27	Data of hour meter for the seventh latest PD	7 byte
12	Data on temperature for the third latest PD (TEMP1)	3 byte	28	Data on temperature for the seventh latest PD (TEMP1)	3 byte
13	Fourth latest “1st PD” data	1 byte	29	Eighth latest “1st PD” data	1 byte
14	Fourth latest “2nd PD” data	1 byte	30	Eighth latest “2nd PD” data	1 byte
15	Data of hour meter for the fourth latest PD	7 byte	31	Data of hour meter for the eighth latest PD	7 byte
16	Data on temperature for the fourth latest PD (TEMP1)	3 byte	32	Data on temperature for the eighth latest PD (TEMP1)	3 byte

Hour meter data; 1 to 5 byte: time, 6 to 7 byte: minute

• Details on "1st/2nd PD" data

Data	Power-down Point
0	No power-down
1	Not used (for MR-POWER)
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D, E	Spare
F	Power-down point not identified

GNG: NG history

Order	Data	Size	Order	Data	Size
1	Latest SD data	1 byte	17	Fifth latest SD data	1 byte
2	Data of subcategory for the latest SD	1 byte	18	Data of subcategory for the fifth latest SD	1 byte
3	Data of hour meter for the latest SD	7 byte	19	Data of hour meter for the fifth latest SD	7 byte
4	Data on temperature for the latest SD	3 byte	20	Data on temperature for the fifth latest SD	3 byte
5	Second latest SD data	1 byte	21	Sixth latest SD data	1 byte
6	Data of subcategory for the second latest SD	1 byte	22	Data of subcategory for the sixth latest SD	1 byte
7	Data of hour meter for the second latest SD	7 byte	23	Data of hour meter for the sixth latest SD	7 byte
8	Data on temperature for the second latest SD	3 byte	24	Data on temperature for the sixth latest SD	3 byte
9	Third latest SD data	1 byte	25	Seventh latest SD data	1 byte
10	Data of subcategory for the third latest SD	1 byte	26	Data of subcategory for the seventh latest SD	1 byte
11	Data of hour meter for the third latest SD	7 byte	27	Data of hour meter for the seventh latest SD	7 byte
12	Data on temperature for the third latest SD	3 byte	28	Data on temperature for the seventh latest SD	3 byte
13	Fourth latest SD data	1 byte	29	Eighth latest SD data	1 byte
14	Data of subcategory for the fourth latest SD	1 byte	30	Data of subcategory for the eighth latest SD	1 byte
15	Data of hour meter for the fourth latest SD	7 byte	31	Data of hour meter for the eighth latest SD	7 byte
16	Data on temperature for the fourth latest SD	3 byte	32	Data on temperature for the eighth latest SD	3 byte

Hour meter data; 1 to 5 byte: time, 6 to 7 byte: minute

• Details on the SD data

Data	Cause of Shutdown
0	No abnormality
1	IC4
2	Module microcomputer IIC
3	Abnormality in DIG-RST2 (power decrease of ASIC)
4	Panel having abnormally high temperature
5	Audio failure (short-circuiting of the speakers)
6	Communication failure of the module microcomputer
7	Three-wire serial communication failure of the main microcomputer
8	IIC communication failure of the main microcomputer
9	Communication failure of the main microcomputer
A	Fan stopped
B	Temperature abnormality
D	Abnormality in MAIN-RST2
F	Others

• Data on the subcategories for the module microcomputer IIC

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (4k)
2	EEPROM (2k)

• Data on the subcategories for failure in 3-wire serial communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	Communication failure of the IF microcomputer
2	IC2 communication failure
3	IC3 communication failure

• Data on the subcategories for failure in IIC communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (128k)
2	GCR
3	IC1 main
4	IC1 sub
5	AD-PLL main
6	AD-PLL sub
7	IC6
8	HDMI1
9	HDMI2
A	7.3VIDEO SW
B	6.2RGB SW
C	Front end 1
D	Front end 2
E	C.C. UCOM/TELETEXT UCOM
F	EEPROM (SLOT)
G	Not used
H	EDID ROM
N	IC6/2 (CMX)

• Subcategory data on abnormal temperature

Data	Cause of Shutdown
2	Temperature inside the unit (INSIDE)
3	Ambient temperature (AIR)

• Subcategory data on other failures

Data	Cause of Shutdown
1	Optical sensor (RLS)
2	Power monitor 1 (VCC-D1)
3	Power monitor 1 (VCC-D2)

GS2: Status information

Order	Data	Size	Remarks
1	Notifying of switching to Standby mode	1 byte	1: Successfully switched to Standby mode
2	Whether the unit has already been adjusted or not	1 byte	0: Adjusted, 1: Not adjusted
3	With/without backup of adjustment data	1 byte	0: With backup, 1: Without backup
4	Power-down information	2 byte	1st byte: 1st PD, 2nd byte: 2nd PD
5	Temperature information (TEMP1)	3 byte	000 to 255
6	Abnormality in RST2 (power decrease of the DC-DC converter)	1 byte	0: Normal, 1: Shutdown process caused by an abnormality completed, 2: In the process of displaying a warning against shutdown caused by an abnormality
7	IC4 communication failure	1 byte	
8	EEPROM communication failure	1 byte	
9	Failure in audio	1 byte	
10	Communication failure of the volume IC	1 byte	
11	Backup-ROM communication failure	1 byte	
12	Failure in temperature information (TEMP1)	1 byte	
13	Activation of panel protection	1 byte	0: Panel protection not activated, 1: Panel protection being activated
14	(Reservation)	9 byte	* * * * * * * * *
15	Hour meter	7 byte	1st-5th bytes: Hour, 6-7th bytes: Minute

• Power-down information

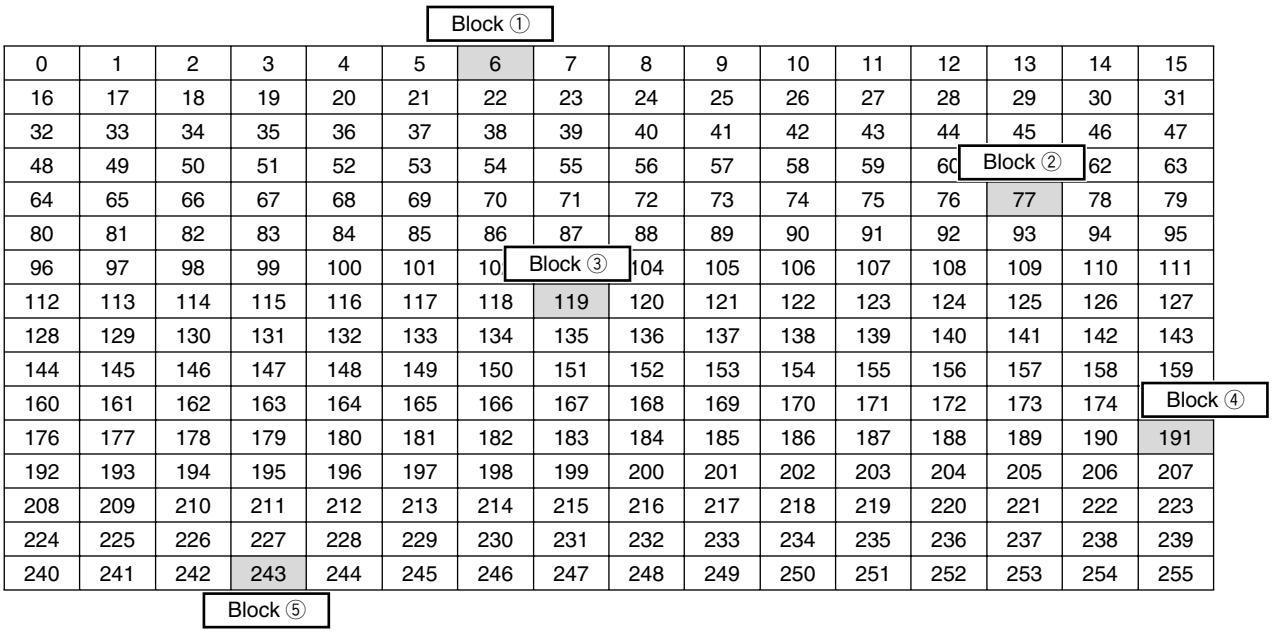
Data	Power-down point
0	No power-down
1	Not used
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	Reservation
E	Reservation
F	Power-down point not identified

GPM: Value of the pulse meter

Order	Data	Size
1	Pulse meter (Block area 1)	10 byte
2	Pulse meter (Block area 2)	10 byte
3	Pulse meter (Block area 3)	10 byte
4	Pulse meter (Block area 4)	10 byte
5	Pulse meter (Block area 5)	10 byte

Note:
The number of electric discharges at each block is displayed. The first digit represents the number of tens of thousands.

[Location of the block areas from which values from the pulse meter are obtained]



GPC: Number of times the power was turned on

Order	Data	Size
1	Power-on counter	8 byte

GAJ: Drive-related adjustment values

Order	Data	Size
1	ABL table currently used	3 byte
2	Upper limit of the power	3 byte
3	Vsus adjustment value	3 byte
4	Vofs adjustment value	3 byte
5	X-SUS-U1 adjustment value (XU1)	3 byte
6	X-SUS-U2 adjustment value (XU2)	3 byte
7	X-SUS-D2 adjustment value (XD2)	3 byte
8	X-SUS-D1 adjustment value (XD1)	3 byte
9	Y-SUS-U1 adjustment value (YU1)	3 byte
10	Y-SUS-U2 adjustment value (YU2)	3 byte
11	Y-SUS-D1-2 adjustment value (YD2)	3 byte
12	Y-SUS-D1-1 adjustment value (YD1)	3 byte
13	Y-SUS-D2-2 adjustment value (YD4)	3 byte
14	Y-SUS-D2-1 adjustment value (YD3)	3 byte

Data	Table
AB1	ABL table for NTSC
AB2	ABL table for PAL, ABL table for PC (48Hz)
AB3	ABL table for PC

LIST OF RS-232C COMMAND

Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
[A]					
ABL	Adjusting power consumption	❍	000	255	
ADC	AD CONTRAST adjustment	❍	000	255	
AMN	Audio MUTE OFF				
AMY	Audio MUTE ON				
AST	Execution of auto setup				The values for positions are not stored in memory in Factory mode.
[B]					
BCP	Transmitting the backup data to the DIGITAL VIDEO Assy				
BRA	Indicate a current baudrate				
BRAS01	Setting the UART to 232C (1200 bps)				
BRAS02	Setting the UART to 232C (2400 bps)				
BRAS03	Setting the UART to 232C (4800 bps)				
BRAS04	Setting the UART to 232C (9600 bps)				
BRAS05	Setting the UART to 232C (19200 bps)				
BRAS06	Setting the UART to 232C (38400 bps)				
BYG	Adjusting BY GAIN	❍	000	255	
[C]					
CNG	MR NG INFORMATION CLEAR				
CPC	Clearing the power-on counter				
CPD	Clearing power-down information				
[D]					
DIN	Turning off the on-screen display				Prohibit OSD indication
DIY	Turning on the on-screen display				While the DIY command is in force, the duration of OSD is unlimited.
DOF	Erasing the currently displayed indications				If another command is received, an OSD is displayed.
DRF	Turning off the power for the drive system				Return to the DRN state by turning the power off
DRN	Turning on the power for the drive system				
DW0	Decresing the adjustment value by 10				
DWn	Decreasing the adjustment value by n (n=1 to 9)				
DWF	Minimizing the adjustment value				
DYN	No D-range correction				
DYY	With D-range correction				
[E]					
EWN	Prohibiting writing of EDID data				
EWY	Permitting writing of EDID data				
[F]					
F48	Video 48-Hz sequence				
F50	Video 50-Hz sequence				
F60	Video 60-Hz sequence				
F61	PC 60-Hz sequence				
F70	PC 70-Hz sequence				
F72	Video 72-Hz sequence				
F75	Video 75-Hz sequence				
FAJ	Determining the adjustment flag of the DIGITAL VIDEO Assy in "adjustment is completed"				
FAN	Turning Service Factory mode off				The OSD equivalent to that usually displayed when the power is turned on is displayed.
FAY	Turning Service Factory mode on				
FCA	Turning fan roll control to auto				
FCM	Maximizing the fan roll control				
FST	Executing FINAL SETUP				
FXO	Selecting audio output fixing				
[G]					
GAJ	Obtaining the adjustment values for the panel				
GMM	Switching the gamma	❍	000	007	
GNG	Obtaining the shutdown information				

Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
GNP	Obtaining the serial no.				
GPC	Obtaining the P ON COUNTER value				
GPD	Obtaining power-down information				
GPM	Obtaining the PULSE METER data				
GPP	Obtaining the PD polling log				
GPW	Obtaining the PANEL W/B data				
GS1	Obtaining the version data for each device				
GS2	Obtaining the temperature data and unit state				Data of module microcomputer system
GS4	Obtaining Factory information				
GST	Obtaining the temperature data and unit state				Data of main microcomputer system
GYG	FY GAIN	❍	000	255	
[H]					
HMD	Indicating the hour meter				
[I]					
IDC	Clearing the ID				
IDS	Setting the ID	❍	(00)	(FF)	
IN1	Switching the main screen to Input 1				
IN2	Switching the main screen to Input 2				
IN3	Switching the main screen to Input 3				
IN4	Switching the main screen to Input 4				
IN5	Switching the main screen to Input 5				
INP	Indicating the input function of current main screen				
INPS01	Switching the main screen to Input 1				
INPS02	Switching the main screen to Input 2				
INPS03	Switching the main screen to Input 3				
INPS04	Switching the main screen to Input 4				
INPS05	Switching the main screen to Input 5				
[L]					
LNN	Prohibiting LOUDNESS				
LNY	Permitting LOUDNESS				
[M]					
M00	Mask mode: OFF				
M01	White: 0 to 100%				
M02	Aging mask				
M03	Aging mask (detection of still picture: OFF)				
M10	RAMP slant 1				
M11	RAMP slant 4				
M12	RAMP slant 1 shifting				
M13	RAMP slant 4 shifting				
M14	V RAMP				
M15	H/V RAMP				
M20	WINDOW-Low: 102 / High: 870				
M21	WINDOW-Low: 102 / High: 1023				
M22	WINDOW-Low: 0 / High: 1023				
M23	WINDOW-High: 1023 (CENTER)				
M24	WINDOW-PEAK WINDOW				
M25	WINDOW-1/7 vertical window				
M26	WINDOW-magenta/green stripe				
M27	WINDOW-green/magenta stripe				
M28	Window (black & white [1 x 8], checkered pattern [for EMG check])				
M29	Window (for W/B adjustment, magenta, yellow)				
M2E	Wiper to prevent phosphor burn				
M2F	Warning mask of cable disconnection (Red and green light alternately)				
M30	COLOR BAR				
M31	Slanted lines				
M51	Raster-white				

Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
M52	Raster-red				
M53	Raster-green				
M54	Raster-blue				
M55	Raster-black				
M56	Raster-cyan				
M57	Raster-magenta				
M58	Raster-yellow				
M59	Raster-cyan 274				
M60	Raster-50 flesh color				
M61	Raster-50 light purple				
M62	Raster-50 sky blue				
M63	Raster-red 779				
M64	Raster-cyan 218				
M65	Raster-cyan 448				
M66	Raster-43 flesh color				
M67	Raster-red 640				
M68	Raster-magenta 98				
M69	Raster-43 sky blue 1				
M70	Raster-43 sky blue 2				
M71	Raster-43 light purple				
M72	Raster-blue 960				
M73	Raster-yellow 200				
M74	Raster-gray 511 (spare)				
MBG	AD MAIN B GAIN	○	000	255	
MBO	AD MAIN B OFFSET	○	000	255	
MCD	Indicating the current color decoding				
MCDS01	Setting the color decoding to RGB (VIDEO)				
MCDS02	Setting the color decoding to COMPONENT1 (YCbCr)				(see Note.1)
MCDS03	Setting the color decoding to COMPONENT2 (YPbPr)				(see Note.1)
MGG	AD MAIN G GAIN	○	000	255	
MGO	AD MAIN G OFFSET	○	000	255	
MRG	AD MAIN R GAIN	○	000	255	
MRO	AD MAIN R OFFSET	○	000	255	
MTN	Turning the video mute off				
MTY	Turning the video mute on				
[N]					
NGN	Prohibiting shutdown operation				No writing of the latest data
[P]					
PAF	PEAK LIMITER OFF				
PAN	PEAK LIMITER ON				
PBH	Panel W/B B-HIGH adjustment	○	000	511	
PBL	Panel W/B B-LOW adjustment	○	000	999	
PDN	Do not pass a PD signal through the POWER SUPPLY Unit				
PDY	Pass a PD signal through the POWER SUPPLY Unit				
PGH	Panel W/B G-HIGH adjustment	○	000	511	
PGL	Panel W/B G-LOW adjustment	○	000	999	
PMD	Indicating the pulse meter				
POF	Turning the power OFF				
PRH	Panel W/B R-HIGH adjustment	○	000	511	
PRL	Panel W/B R-LOW adjustment	○	000	999	
[R]					
RYG	RY GAIN	○	000	255	
[S]					
SBG	AD SUB B GAIN	○	000	255	
SBO	AD SUB B OFFSET	○	064	191	
SFT	Indicating the current signal format				

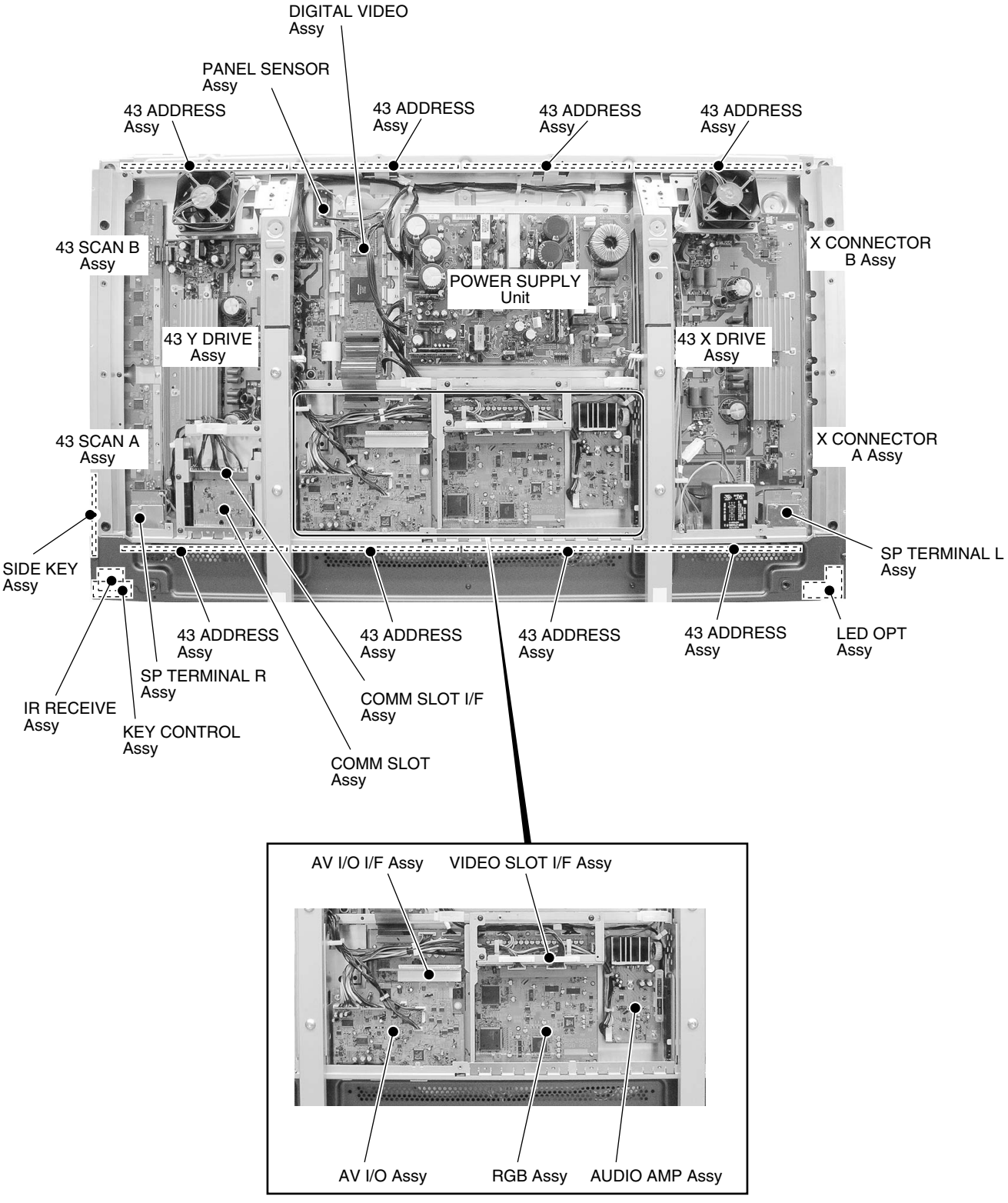
Note.1: COMPONENT1 of the PDP-503CMX and PDP-433CMX,corresponds to COMPONENT2 of this device, and COMPONENT2 corresponds to COMPONENT1.

Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
SFTS01	Setting the signal format to PC FORMAT1 (VGA or XGA or SXGA or 720-PC)				
SFTS02	Setting the signal format to PC FORMAT2 (WVGA or WXGA or SXGA+)				
SFTS03	Setting the signal format to (VIDEO) 525p or 750p				
SFTS04	Setting the signal format to PC AUTO				
SGG	AD SUB G GAIN	○	000	255	
SGO	AD SUB G OFFSET	○	064	191	
SN0	Setting 1, 2, or 3 for the serial number of the panel				
SN1	Setting 4, 5, or 6 for the serial number of the panel				
SN2	Setting 7, 8, or 9 for the serial number of the panel				
SN3	Setting 10, 11, or 12 for the serial number of the panel				
SN4	Setting 13, 14, or 15 for the serial number of the panel				
SRG	AD SUB R GAIN	○	000	255	
SRO	AD SUB R OFFSET	○	064	191	
SVL	Adjusting the sub volume	○	000	020	
SWM	Full-screen display of main output				
SWS	Full-screen display of sub output				
SZM	Indicating the current screen size setting				
SZMS00	Setting the screen size to Dot by Dot or PARTIAL				
SZMS01	Setting the screen size to 4:3				
SZMS02	Setting the screen size to FULL or FULL1080i				
SZMS03	Setting the screen size to ZOOM				
SZMS04	Setting the screen size to CINEMA				
SZMS05	Setting the screen size to WIDE				
SZMS06	Setting the screen size to FULL1035i				
[U]					
UAJ	Setting the DIGITAL VIDEO ASSY adjustment flag to “unadjusted”				
UP0	Increasing the adjustment value by 10				
UPn	Increasing the adjustment value by n (n=1 to 9)				
UPF	Maximizing the adjustment value				
[V]					
VOF	Offset voltage adjustment	○	000	255	
VOL	Adjusting the audio volume	○	000	045	
VRO	Selecting the variable audio output				
VSG	CVY GAIN	○	064	191	
VSO	Adjusting the CV/YC input with difference in the input	○	000	255	
VSU	SUS voltage adjustment	○	000	255	
[X]					
XD1	D1 trailing-edge pulse of X-SUS	○	000	255	
XD2	D2 trailing-edge pulse of X-SUS	○	000	255	
XU1	U1 leading-edge pulse of X-SUS	○	000	255	
XU2	U2 leading-edge pulse of X-SUS	○	000	255	
[Y]					
YD1	D1 trailing-edge pulse of Y-SUS	○	000	255	
YD2	D2 trailing-edge pulse of Y-SUS	○	000	255	
YD3	D3 trailing-edge pulse of Y-SUS	○	000	255	
YD4	D4 trailing-edge pulse of Y-SUS	○	000	255	
YU1	U1 leading-edge pulse of Y-SUS	○	000	255	
YU2	U2 leading-edge pulse of Y-SUS	○	000	255	

7. GENERAL INFORMATION

7.1 DIAGNOSIS

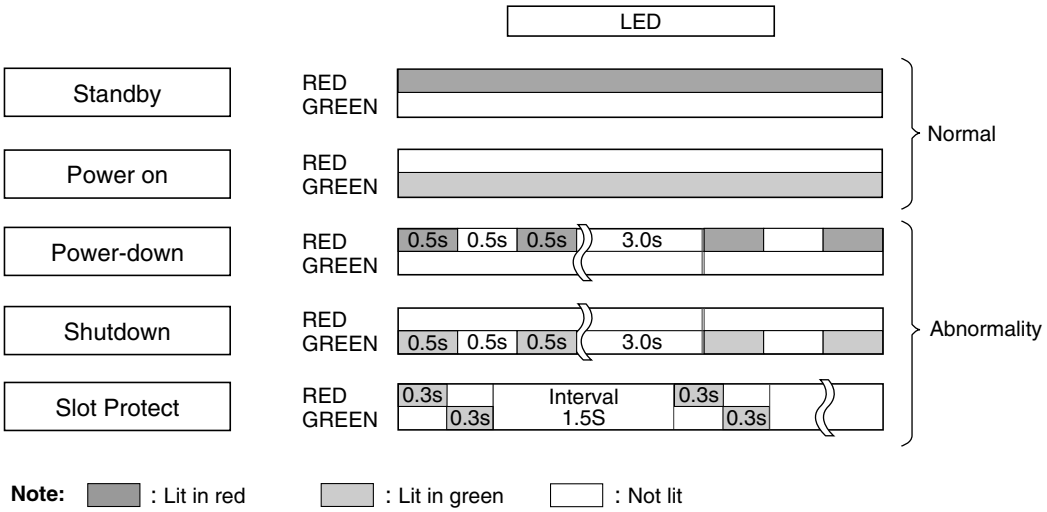
7.1.1 CONFIGURATION OF THE PC BOARD



● **Rear view**

7.1.2 DIAGNOSIS FOR SHUTDOWN AND POWER-DOWN BY LED

• Operation statuses indicated by LEDs



Note: : Lit in red : Lit in green : Not lit

• Identification of locations having abnormality by the number of times the LEDs flash

■ On Shutdown and power-down

Shutdown

• Operation: When the microcomputer detects any abnormality, it forcibly shuts the unit off.

• LED indication: The LED flashes in green.

Note: The LED flashes regardless of the FRONT INDICATOR setting on the Integrator menu.

Power-down

• Operation: When the unit is in emergency status, a protection circuit is activated, and the power is shut off.

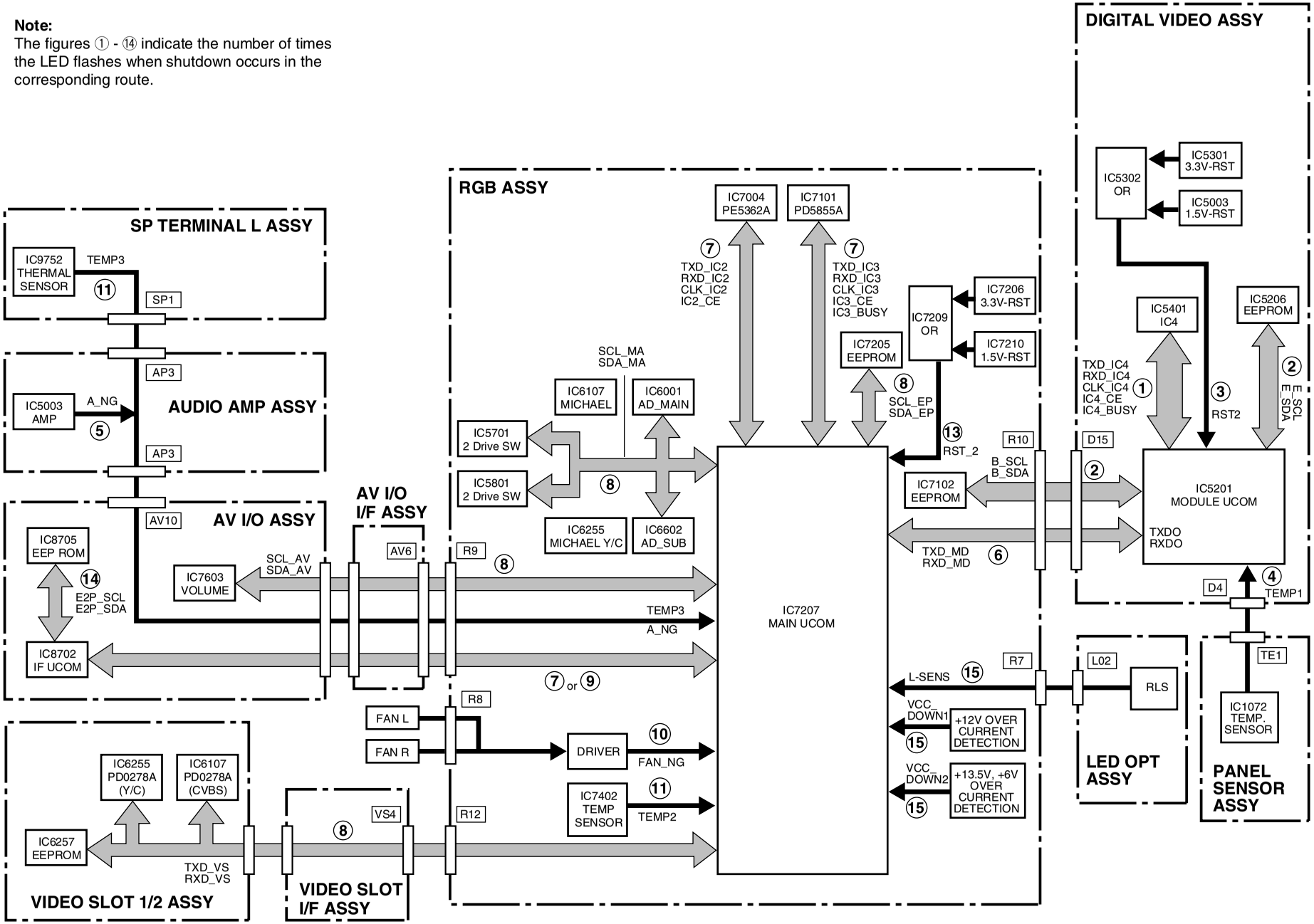
• LED indication: The LED flashes in red.

Category	LED		Content		Unit's Operation	Warning Message
	STB	ON				
SD		Once	Communication failure of the panel-drive IC		Shutdown 3 seconds after warning	Shutdown by circuit failure (01)
		Twice	Communication failure of the module IIC		Shutdown 3 seconds after warning	Shutdown by circuit failure (02)
		3 times	Power decrease of the digital DC-DC converter		Immediate shutdown	
		4 times	Panel having high temperature		Shutdown 30 seconds after warning	Shutdown by warning temperature rise (04)
		5 times	Audio failure		Shutdown 3 seconds after warning	Shutdown by warning speaker failure (05)
		6 times	Communication failure of the module microcomputer		Shutdown 3 seconds after warning	Shutdown by circuit failure (06)
		7 times	Main 3-wire serial communication in failure		Shutdown 3 seconds after warning	Shutdown by circuit failure (07)
		8 times	Communication failure of the main IIC		Shutdown 3 seconds after warning	Shutdown by circuit failure (08)
		9 times	Communication failure of the main microcomputer		Immediate shutdown	
		10 times	Fan in failure		Shutdown 3 seconds after warning	Shutdown by warning fan abnormality (10)
		11 times	Unit having higher temperature		Shutdown 30 seconds after warning	Shutdown by warning temperature rise (11)
		13 times	Main microcomputer ASIC power supply NG		Immediate shutdown	
		14 times	Communication failure of IF-EEPROM		Shutdown 3 seconds after warning	Shutdown by circuit failure (14)
		15 times	Other failure	RLS	Shutdown 30 seconds after warning	Shutdown by circuit failure (15)
				VCC-D1	Shutdown 3 seconds after warning	
				VCC-D2		
PD	Once					
	Twice		Power		Immediate power-down	
	3 times		SCAN		Immediate power-down	
	4 times		SCAN-5V		Immediate power-down	
	5 times		Y-DRIVE		Immediate power-down	
	6 times		Y-DCDC		Immediate power-down	
	7 times		Y-SUS		Immediate power-down	
	8 times		ADDRESS		Immediate power-down	
	9 times		X-DRIVE		Immediate power-down	
	10 times		X-DCDC		Immediate power-down	
	11 times		X-SUS		Immediate power-down	
	12 times		DIGITAL-DCDC		Immediate power-down	
	15 times		UNKNOWN (Not identified) ∗		Immediate power-down	

∗ If the unit cannot identify which protection circuit was activated, even if a power-down had been detected, the red LED may flash 15 times.

• Block diagram of the shutdown signal system

Note:
The figures ① - ⑭ indicate the number of times the LED flashes when shutdown occurs in the corresponding route.



• Diagnosis of shutdown

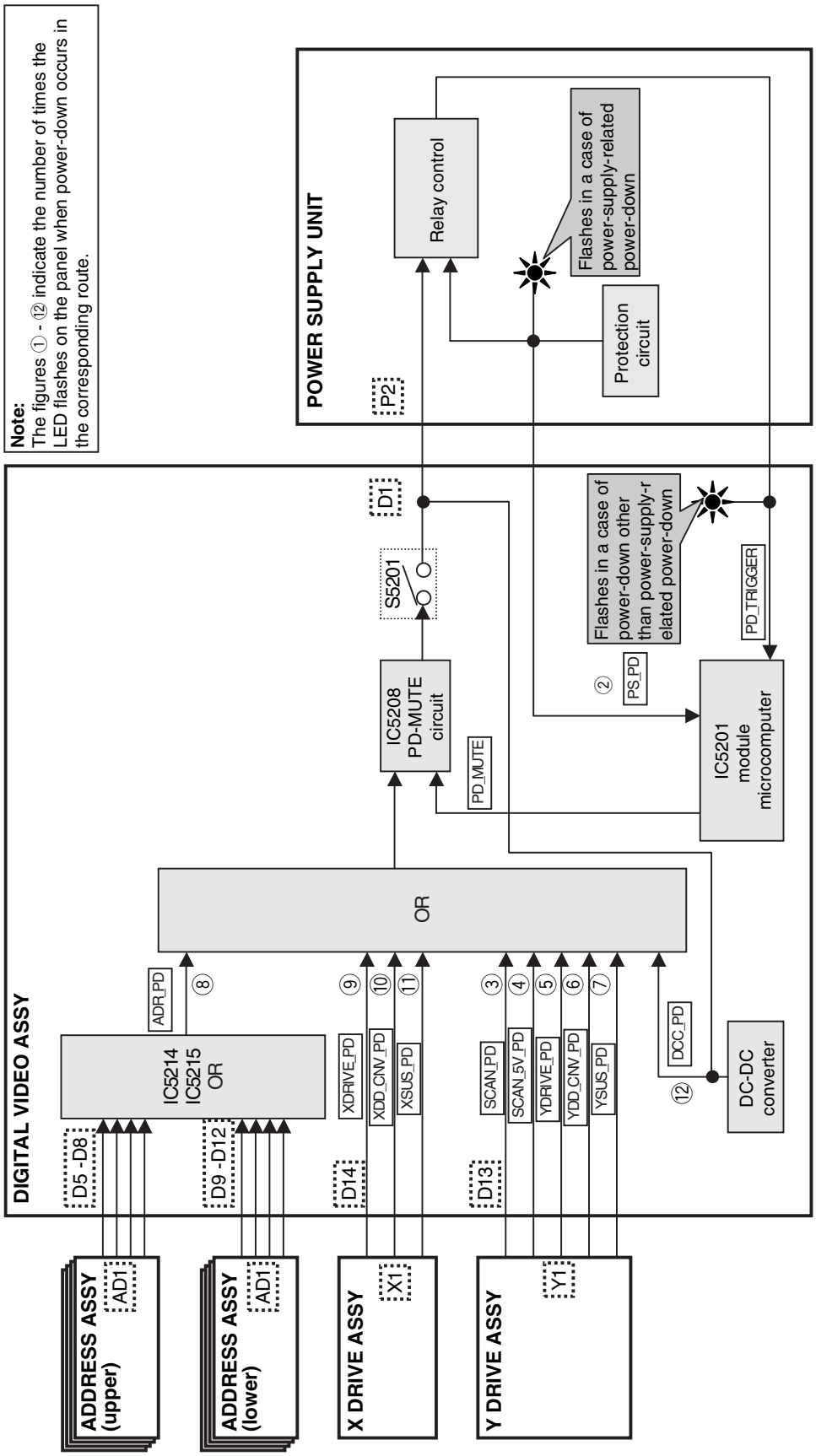
	SD Circuit in Operation	Defective Assy	Reason for Shutdown	Point to be Checked	Possible Defective Part	Remarks
1	Communication failure of the panel-drive IC	DIGITAL VIDEO	Communication failure of IC4 or defective peripheral circuits	IC4 Block, Panel Flash Block	IC5401, IC5305	
			Writing failure of IC4			After turning the unit on again, check if the data on the version can be read with the GS1 command.
2	Communication failure of the module IC (Check the shutdown subcategory on the Factory menu.)	DIGITAL VIDEO	Communication failure of the EEPROM (4k) or defective peripheral circuits	Module Ucom Block	IC5206	
		RGB	Communication failure of the EEPROM (2k) or defective peripheral circuits	IC3 Block	IC7102	
			Defective 114-pin FPC	CN400(D15) - CN7101(R10)	ADY1081	Check if the cable is disconnected or not securely connected.
3	Power decrease of DIGITAL-DC-DC	DIGITAL VIDEO	Defective DC-DC converter	Digital DD Control Block	U5601	Check if 3.3V, 2.5V, and 1.5V are activated (not short-circuited).
		DIGITAL VIDEO	Defective RST IC	Panel Flash Block	IC5301,IC5302,IC5303	
		POWER SUPPLY	No startup of 12 V			
4	Panel having higher temperature	DIGITAL VIDEO	Disconnection of cable	CN5202 - CN1071		
			Panel having higher temperature	Surrounding temperature		Temperature detected by a sensor must not exceed 90°C (TEMP1).
5	Audio failure		Speaker short-circuited	Speaker terminals		Check if the speaker cables are in contact with the chassis, etc.
		AUDIO AMP	Defective AMP IC	Audio Amp	IC5003	
		AUDIO AMP	Disconnection of cable	CN7601(AV1) - CN5001(AP2)		Check if the cable is disconnected or not securely connected.
6	Communication failure of the module microcomputer	DIGITAL VIDEO	Communication failure in the module microcomputer or defective peripheral circuits	Module Ucom Block	IC5201	Check short/open of the communication line (TXDO/RXDO).
			Failure in writing in the module microcomputer	Module Ucom Block	IC5201	
			Defective 114-pin FPC	CN4004(D15) - CN7101(R10)	ADY1081	Check if the cable is disconnected or not securely connected.
7	Serial communication failure of the 3-wire of the main microcomputer	AV I/O	Communication failure in the IF microcomputer or defective peripheral circuits	IF Ucom Block	IC8702	Check short / open of the communication line (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF)
		RGB	Communication failure in the CELIA or defective peripheral circuits	IC2 Block	IC7004	Check short / open of the communication line (TXD_IC2/RXD_IC2/CLK_IC2/CE_IC2)
		RGB	Communication failure in the MIKE or defective peripheral circuits	IC3 Block	IC7101	Check short / open of the communication line (TXD_IC3/RXD_IC3/CLK_IC3/BUSY_IC2/CE_IC3)
		RGB	Failure in writing in the MIKE	IC3 Block	IC7101	
8	IIC communication failure of the main microcomputer (Confirm the SD subcategory in the factory menu)	VIDEO SLOT1 or 2	Failure in MICHAEL Y/C or defective peripheral circuits	IC1 (Y/C) Block	IC6255	
		VIDEO SLOT1 or 2	Failure in MICHAEL CVBS or defective peripheral circuits	IC1 (CVBS) Block	IC6107	
		RGB	Failure in AD MAIN or defective peripheral circuits	Main AD Block	IC6001	
		RGB	Failure in AD SUB or defective peripheral circuits	Sub LPF & AD Block	IC6602	
		RGB	Failure in ROZ or defective peripheral circuits	Bus SW1 Block	IC5701	
		RGB	Failure in ROZ or defective peripheral circuits	Bus SW2 Block	IC5801	
		AV I/O	Failure in VOL IC or defective peripheral circuits	AV I/O Assy	IC7603	
		RGB	Failure in EEPROM or defective peripheral circuits	Main Ucom Block	IC7205	
		VIDEO SLOT1 or 2	Failure in EEPROM or defective peripheral circuits	IC1 (Y/C) Block	IC6257	
			Defective communication line between any of the above devices and the main microcomputer		IC7207	Check short / open of SCL_AV/SDA_AV, SCL_MA/SDA_MA and SCL_EP/SDA_EP

	SD Circuit in Operation		Defective Assy	Reason for Shutdown	Point to be Checked	Possible Defective Part	Remarks
9	Communication failure in main microcomputer		RGB	Communication failure in main microcomputer or defective peripheral circuits	Main Ucom Block	IC7207	Check short / open of communication line (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
			RGB	Failure in writing in the main microcomputer	Main Ucom Block	IC7207	
10	Fan failure		FAN	Failure in the fan motor or fan stopped by attached dust			
			RGB	Disconnection of cable	Relay part between CN7402 (R8) and the wire from the fan		Check if the cable is disconnected or not securely connected.
11	Unit having higher temperature			Use under high temperature	Surrounding/internal		Temperature detected by a sensor must not exceed 65°C (TEMP3) /95°C (TEMP2)
			AUDIO AMP	Disconnection of cable	CN5003(AP3) - CN9702(SP1)		Check if the cable is disconnected or not securely connected.
13	Power decrease of DIGITAL DC-DC		DIGITAL VIDEO	Defective DC-DC converter	Digital DD converter Block	U5601	Check if 3.3V,2.5V and 1.5V are activated (not short-circuited).
			RGB	Defective RST IC	MAIN UCOM Block	IC7206, IC7209, IC7210	
			POWER SUPPLY	No startup of 12V			
			RGB	Disconnection of cable	CN7408-CN5002		Check if the cable is disconnected or not securely connected.
14	Communication failure in IF EEPROM		AV I/O	Communication failure in EEPROM or defective peripheral circuits	I/F Ucom Block	IC8705	Check short / open of E2P_SCL/E2P_SDA
15	Other failures	RLS	RGB	Disconnection of cable	CN9051(L0) - CN7205(R7)		Check if the cable is disconnected or not securely connected.
		VCC-D1	RGB	Defective circuits in the 12V system			Check for shortcircuits in the 12V system.
		VCC-D2	RGB	Defective circuits in the 13.5V and 6.5V systems.			Check for shortcircuits in the 13.5V and 6.5V systems.

• Diagnosis of abnormalities other than shutdown and power-down

Symptoms	Defective Assy	Abnormal Summary	Point to be Checked	Possible Defective Part	Remarks
No power (LED unlit)		Disconnection of cable	CN7404		Check if the connection between the POWER SUPPLY and RGB assemblies is properly made.
	POWER SUPPLY	STB 3.3 V not started	CN7404(AV1)-11 pin		
	AV I/O	Defective IF microcomputer	IF Ucom Block	IC8702	Check if the oscillation is normal (X8701 = 32 kHz, X8702 = 9.8 MHz) and if RESET is set to H (IC8703).
No power (The LED remains lit in red and does not light in green.)	RGB	Defective main microcomputer	Main Ucom Block	IC7207	If communication with the main microcomputer fails approx. 20 seconds after the AC power is on, the main microcomputer may be defective.
Key input not effective		Disconnection of cable	CN4801 - CN9002 CN9001 - CN8702		Check if the cables are not connected or securely connected.
Remote control unit not effective		Disconnection of cable	CN4901 - CN8901		Check if the cable is not connected or securely connected.
	IR RECEIVE	Defective IR receiver section	IR	U4901	Check if a pulse is output when the key corresponding to Pin 3 of the CN4901 is pressed.
Abnormal screen (Data of every other dot are abnormal)	DIGITAL VIDEO	Defective IC4	IC4 Block	IC5401	Check if an abnormal area in the screen changes when the FPC connected to the address corresponding to the abnormal area is replaced with the one corresponding to the next address.
	ADDRESS				Check that an abnormal area in the screen does not change when the FPC connected to the address corresponding to the abnormal area is replaced with the one corresponding to the next address.
		Defective 114-pin FPC	CN7101 - CN5001	ADY1081	Check if the FPC is broken or not securely connected.

• **Block diagram of the power-down signal system**



• Power-down diagnosis (defective points)

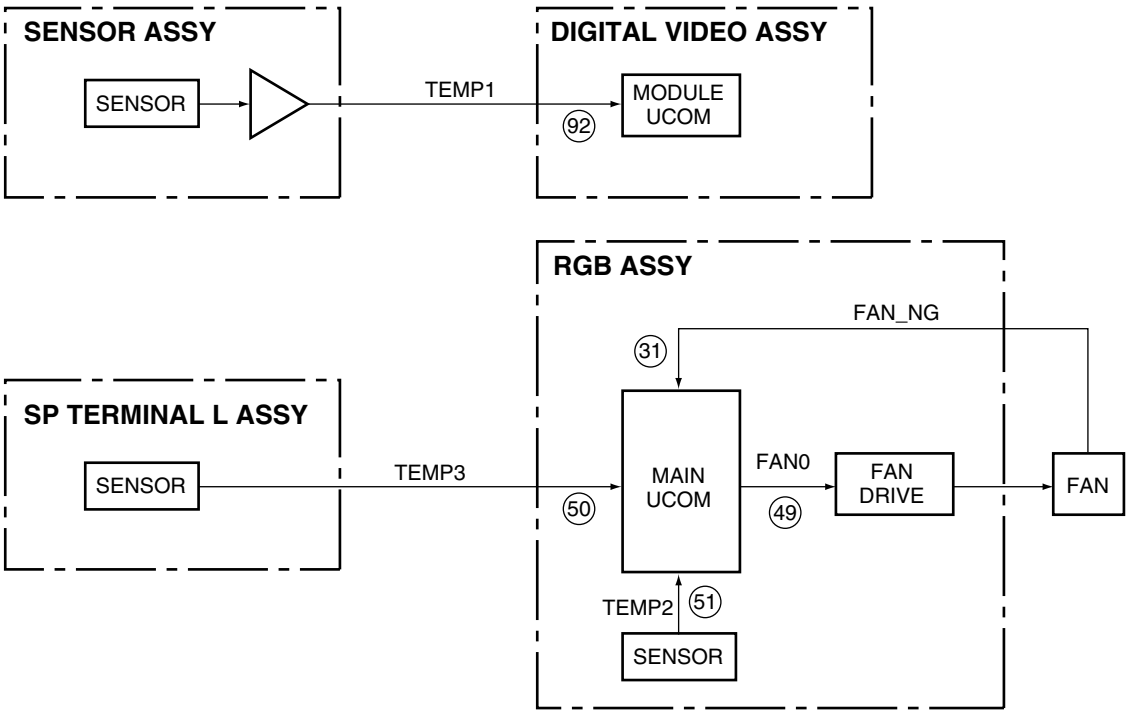
	PD Circuit in operation	Defective Assy	Reason for Power-down	Point to be Checked	Possible Defective Part	Remarks
1	NONE					
2	POWER	POWER SUPPLY Unit				If the elapsed time from relay-on until the LED in the power supply unit lights is about 2-4 seconds, the defective assembly may be the 50 X or Y DRIVE.
		50 X DRIVE Assy	VSUS UVP	X SUS BLOCK	IC1203 - IC1207 (mask module)	
		50 Y DRIVE Assy	VSUS UVP	Y SUS BLOCK	IC2303 - IC2307 (mask module)	
3	SCAN	50 SCAN A, B Assy or Y 43 DRIVE Assy	VH UVP	SCAN IC	SCAN IC	
			VH UVP	VH DC/DC	IC2401, IC2402, IC2410, L2401	
			Disconnection of cable detected	CN2001, CN2301		
4	SCN-5V	50 SCAN A, B Assy or 43 Y DRIVE Assy	Disconnection of cable detected	CN2101, CN2102		
			IC5V UVP	SCAN IC, IC5V DC/DC Y SUS BLOCK	SCAN IC, Q2401, Q2402, IC2304, IC2309	
			IC5V OVP	IC5V DC/DC	IC2403, IC2411	
5	Y-DRIVE	50 Y DRIVE Assy	+16.5V OCP	Y SUS BLOCK	IC2303 - IC2307 (mask module), IC2301, IC2304, R2309	
6	Y-DCDC	50 Y DRIVE Assy	VOFS UVP	VOFS DC/DC	IC2404, IC2412, Q2404, Q2407	
			VOFS OVP	VOFS DC/DC	IC2404, IC2412	
			VH OVP	VH DC/DC	IC2402, IC2410	
7	Y-SUS	50 Y DRIVE Assy	Power-down caused by detection of middle-point voltage	Y RESONANCE BLOCK	Q2202, Q2214, Q2205, Q2206, Q2208, Q2209, Q2211, Q2212, IC2201, IC2202, Control signal series resistors	
		DIGITAL VIDEO Assy	Power-down caused by detection of middle-point voltage	DIGITAL VIDEO Assy	IC5401, Control signal series resistors	
8	ADRS	50 ADDRESS Assy	Disconnection of cable detected	CN1501		
			Power-down caused by detection of a power surge	ADR RESONANCE BLOCK	R1631, Q1601, D1602	
			Power-down caused by detection of middle-point voltage	ADR RESONANCE BLOCK	Q1602, C1609, D1606, D1607	
9	X-DRIVE	50 X DRIVE Assy	Disconnection of cable detected	CN1001, CN1201		
			+16.5V OCP	X SUS BLOCK	IC1203, IC1207 (mask module), IC1204, IC1206, R1230	
			VRN OCP	X SUS BLOCK	Q1205, R1226, R1251	
10	X-DCDC	50 X DRIVE Assy	VRN OVP	VRN DC/DC	IC1403, IC1404	
			VRN UVP	VRN DC/DC	IC1402, IC1403, IC1404	
				X SUS BLOCK	Q1205, R1226, R1251	
11	X-SUS	50 X DRIVE Assy	Power-down caused by detection of middle-point voltage	X RESONANCE BLOCK	Q1102, Q1103, Q1105, Q1106, Q1108, Q1109, Q1111, Q1112, IC1101, IC1102, Control signal series resistors	
		DIGITAL VIDEO Assy	Power-down caused by detection of middle-point voltage	DIGITAL VIDEO Assy	IC5401, Control signal series resistors	
12	DIG-DCDC	DIGITAL VIDEO Assy	DCDC +3.3V, +1.5V OVP	DC DC CONVERTER BLOCK	U5601 (DC DC CONVERTER Module)	

OVP : **O**ver **V**oltage **P**rotection
UVP : **U**nder **V**oltage **P**rotection
OCP : **O**ver **C**urrent **P**rotection

7.1.3 PROCESSING AT THE TIME OF ABNORMALITIES

Fan and temperature sensor

● **Circuitry**



● **Port monitoring specifications**

Port Name	Shutdown Name	Assign	Control Microcomputer	Active	Remarks
FAN_NG	FAN	31	Main	Shutdown when the signal becomes high	Disconnection of the fan connector or abnormality in operation of the fan detected
TEMP1	Unit under high temperature	92	Module	Shutdown when the set value is exceeded	Monitoring high temperature of the panel, Drive system temperature compensation
TEMP2	Unit under high temperature	51	Main		Monitoring high temperature of boards
TEMP3	Unit under high temperature	50	Main		Monitoring ambient temperature

7.1.4 TEMPERATURE COMPENSATION OF DRIVE SYSTEM VOLTAGE

Function: To control the DRIVE-system voltage according to the temperature (Temperature compensation functions such that the voltage is lowered on the lower-temperature side and the voltage becomes higher on the higher-temperature side.)

Purpose: For improving the yield by compensating for the temperature characteristics of the panel

Note: • Temperature compensation is performed only for the VSUS voltage, and not for the VOFS voltage. This compensation is controlled by the software.
• Temperature compensation is carried out with the value of TEMP1.

7.1.5 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

Function: Only the power for the low voltage lines (16 V, 12 V, and 6.5 V) is on, and the power for the high voltage lines (VSUS, VADR) is off.

Usage: 1. Use when only an operational check for the low voltage lines is required, such as when making repairs.
2. Use when rewriting of a program for each microcomputer is required.

Methods: 1 Set the slide switch (S5201) on the DIGITAL VIDEO Assy to its upper position ("DRF" is mentioned on the board see Fig. below).
2. Send the "DRF" RS232C command to turn the large-signal system off.
3. Send the "DRN" RS232C command to turn the large-signal system on.

Notes:

- As the unit enters Power-Down and Muting On mode when Methods 1 and 2 are performed, and power-downs other than those caused by the power (PS_PD) and DC-DC-converter (DIGITAL_DC-DC) circuits are not activated.
- If the slide switch is set from OFF to ON while the power is on, a power-down will occur. Be sure to turn the power off before switching the slide switch.
- When operate it with RS232C commands, power-down (PD) is not activated. However, please do not perform the drive ON operation during the power on.
- Although the "DRF" RS232C command is enabled during Standby, if the power is turned on then turned off, the unit will return to "DRN" mode.

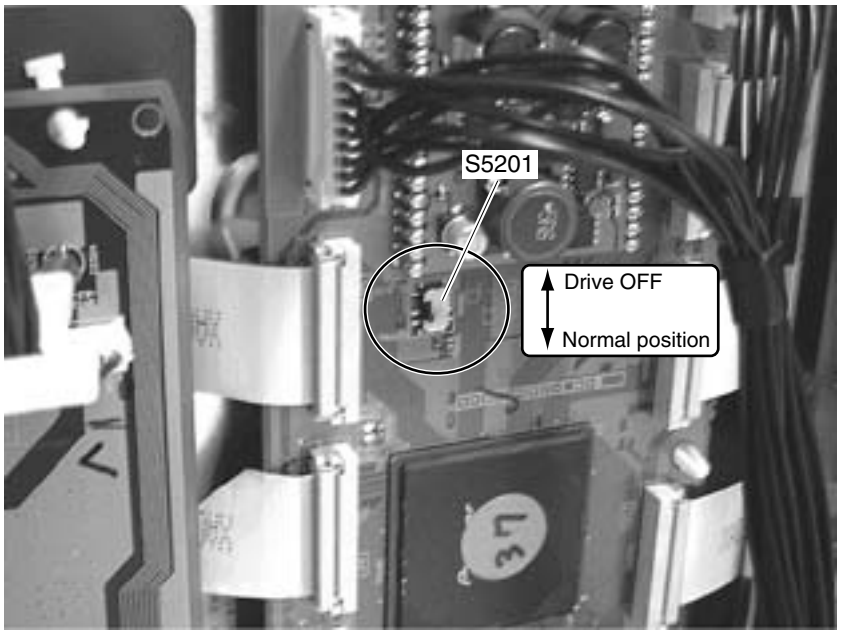


Fig. Drive OFF switch

7.1.6 BACKUP THE ADJUSTMENT VALUES FOR THE MAIN UNIT

Outline

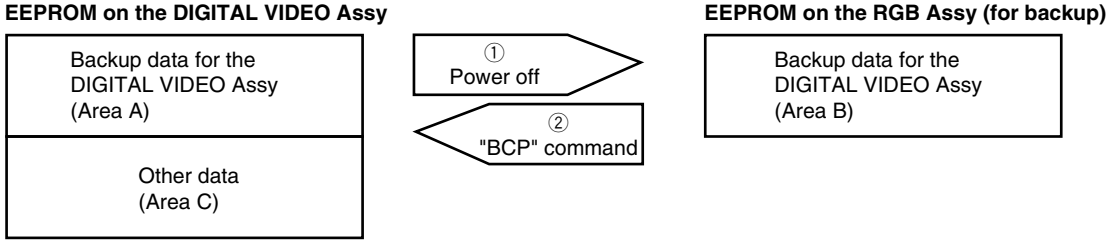
The data on the adjustment values for the main unit are stored in an EEPROM (IC5206, 4 kbits) on the DIGITAL VIDEO Assy. Part of the data (area A in the figure below) are automatically copied to an EEPROM (IC7102, 2 kbits) mounted on the RGB Assy for backup. When the DIGITAL VIDEO Assy is replaced, the backup data on the adjustment values for the main unit stored in the RGB Assy can be copied to the new DIGITAL VIDEO Assy, thus enabling you to omit newly performing adjustments on the main unit. The logs for the product (power-down log, etc.) can also be copied.

Data to be backed up in the digital EEPROM (area A)

- Margin adjustment values (Vsus, Vofset)
- Power upper-limit adjustment value (ABL)
- PANEL white-balance adjustment values
  (PANEL-R HIGH, PANEL-G HIGH, PANEL-B HIGH, PANEL-R LOW, PANEL-G LOW, PANEL-B LOW)
- Drive waveform adjustment values
  (X-SUS-U1, X-SUS-U2, X-SUS-D1, X-SUS-D2, Y-SUS-U1, Y-SUS-U2, Y-SUS-D1, Y-SUS-D2, Y-SUS-D3, Y-SUS-D4)
- Hour meter
- Pulse meter
- Number of times the power has been turned on
- PD/SD logs
- Serial Number

Basic flow of automatic backup

Using a keyword, the data in areas A and B are judged as to whether they have been adjusted or not, then copying is performed.

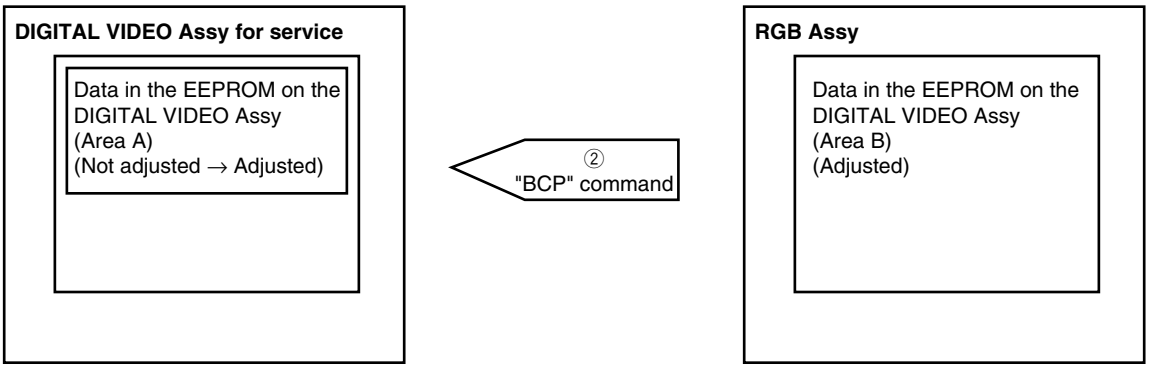


① The keyword on the DIGITAL VIDEO Assy is checked when the power is turned off, and if it is "adjusted", automatic backup is performed.
② If the keyword on the RGB Assy (Area B) is "adjusted," copying can be performed with the "BCP" RS232C command.

Actual automatic backup operations

1. When the DIGITAL VIDEO Assy is replaced with an Assy for service

Changing of keywords is not required. Replace the DIGITAL VIDEO Assy with an Assy for service, and send the "BCP" RS232C command. Thus, the backup data in the EEPROM on the RGB Assy are copied to the EEPROM on the DIGITAL VIDEO Assy for service.



2. When a repaired DIGITAL VIDEO Assy is mounted on another unit (reuse of the repaired DIGITAL VIDEO Assy)

The keyword of the DIGITAL VIDEO Assy to be reused must be changed to "not adjusted" using the "UAJ" RS232C command.

Note 1: If a repaired DIGITAL VIDEO Assy is mounted in another unit (Unit 2) without this change of keyword, and the power to the unit 2 is turned off, the data in force before the repair of the DIGITAL VIDEO Assy will be copied to Area B of the RGB Assy of Unit 2, overwriting the data necessary for Unit 2. Once overwritten, the original data will not be restored.

3. When a repaired DIGITAL VIDEO Assy is mounted on the original unit (reuse of the repaired DIGITAL VIDEO Assy)
Changing of keywords is not required. After the repaired DIGITAL VIDEO Assy is mounted in the original unit, the unit can operate with its latest adjustment values.

4. When both the DIGITAL VIDEO Assy and RGB Assy are simultaneously replaced with other assemblies
The automatic backup function of this unit will not work properly.

Note 2: Readjustment of the main unit is required.
Note 3: After readjustment of the main unit, send the "FAJ" RS232C command to change the keyword of the DIGITAL VIDEO Assy to "adjusted." Thus, when the unit is turned off, automatic backup of adjustment data is performed properly.
Note 4: If readjustment of the main unit is totally impossible, it can be omitted by installing the EEPROM (IC5206, 4 kbits) originally mounted on the DIGITAL VIDEO Assy for service.
Note 5: After copying the backup data, turn the power off then back on to reflect the copied backup data.

■ Miscellaneous

If the white balance (W/B) value is largely shifted because of aging, etc., W/B adjustment is required. (As this may be a rare case, the adjustment procedures are described below, just for your reference.

[W/B-adjustment procedures]

The W/B adjustment can be performed with the RS232C commands. Minolta CA-100 color difference meter are required.

① Send the "FAY" RS232C command to enter Factory mode.

② Set the keyword for the DIGITAL VIDEO Assy to "not adjusted" with the "UAJ" RS232C command.

③ Obtain the current adjustment values in the two adjustment tables (see "6.6 Command Description").
- Shifting to Table 1: Send the "M51" and "F60" commands. Obtaining the adjustment values: Send the "GPW" command.
- Shifting to Table 2: Send the "M51" and "F75" commands. Obtaining the adjustment values: Send the "GPW" command.

④ For each table, set the brightness.
- Adjustment in Table 1: After sending the "F60" command, perform adjustment.
- Adjustment in Table 2: After sending the "F75" command, perform adjustment.

For each table, change the RGB parameters so that the values measured using a Minolta color difference meter (CA-100) become as indicated below. In this case, any one of PRH, PGH, or PBH must be set to 256.

	Cd/mm
x	285
y	289

"PRH***" : 000 - 511
"PGH***" : 000 - 511
"PBH***" : 000 - 511

⑤ Check after adjustment
- Shifting to Table 1: Send the "F60" command. Obtaining the adjustment values: Send the "GPW" command.
- Shifting to Table 2: Send the "F75" command. Obtaining the adjustment values: Send the "GPW" command.

Check that the adjustment data have been changed.

⑥ Change the keyword for the DIGITAL VIDEO Assy to "adjusted" by sending the "FAJ" RS232C command.
Note: Use a Minolta CA-100 color difference meter or the equivalent for measurement. Otherwise, the specifications of the product cannot be assured.

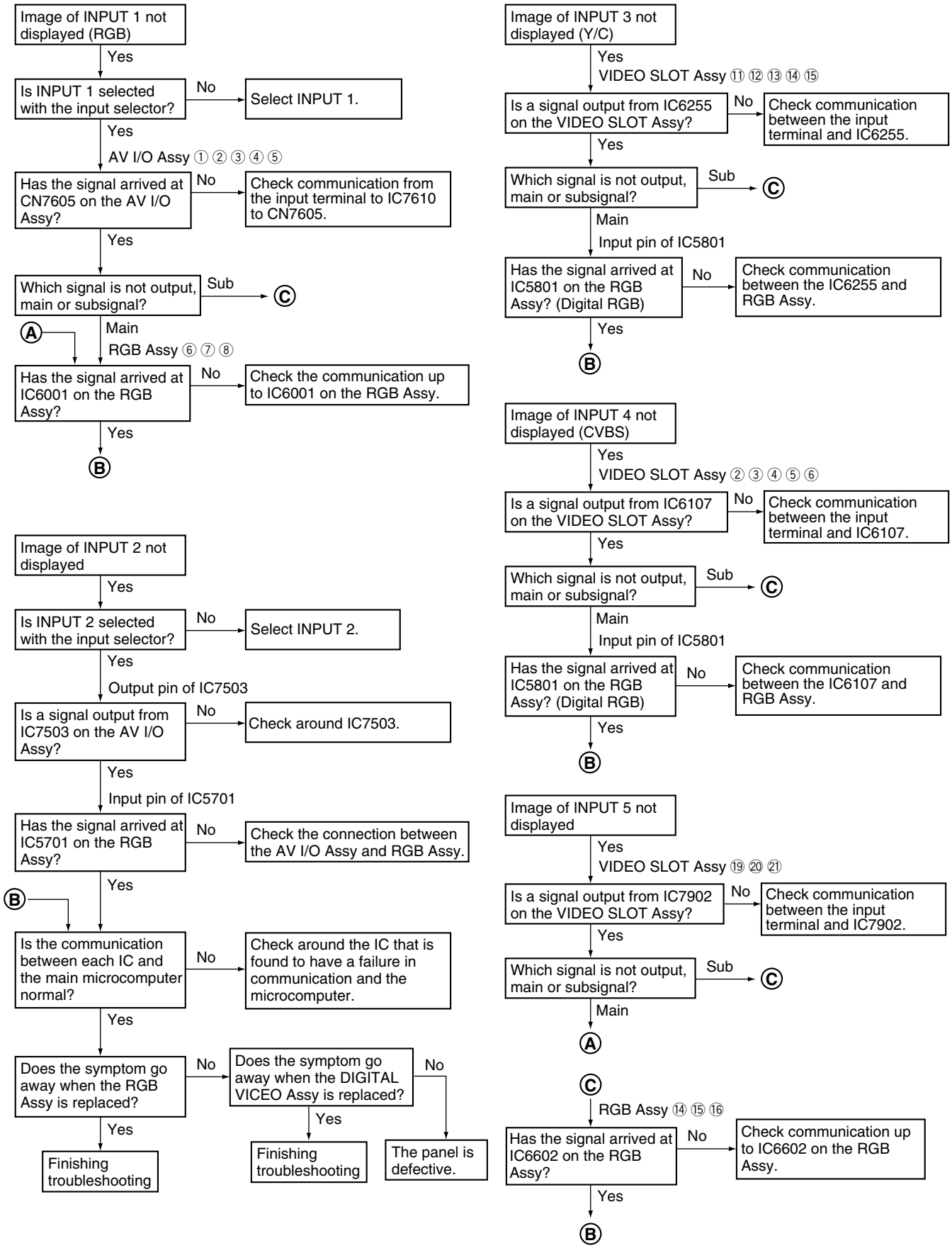
⑦ Send the "FAN" RS232C command to enter Normal mode.
- If the value is different from that you set, readjust it.

Note: To reset the adjustment to its original value, send the "BCP" RS232C command then turn the power off then back on to retrieve the backup data.

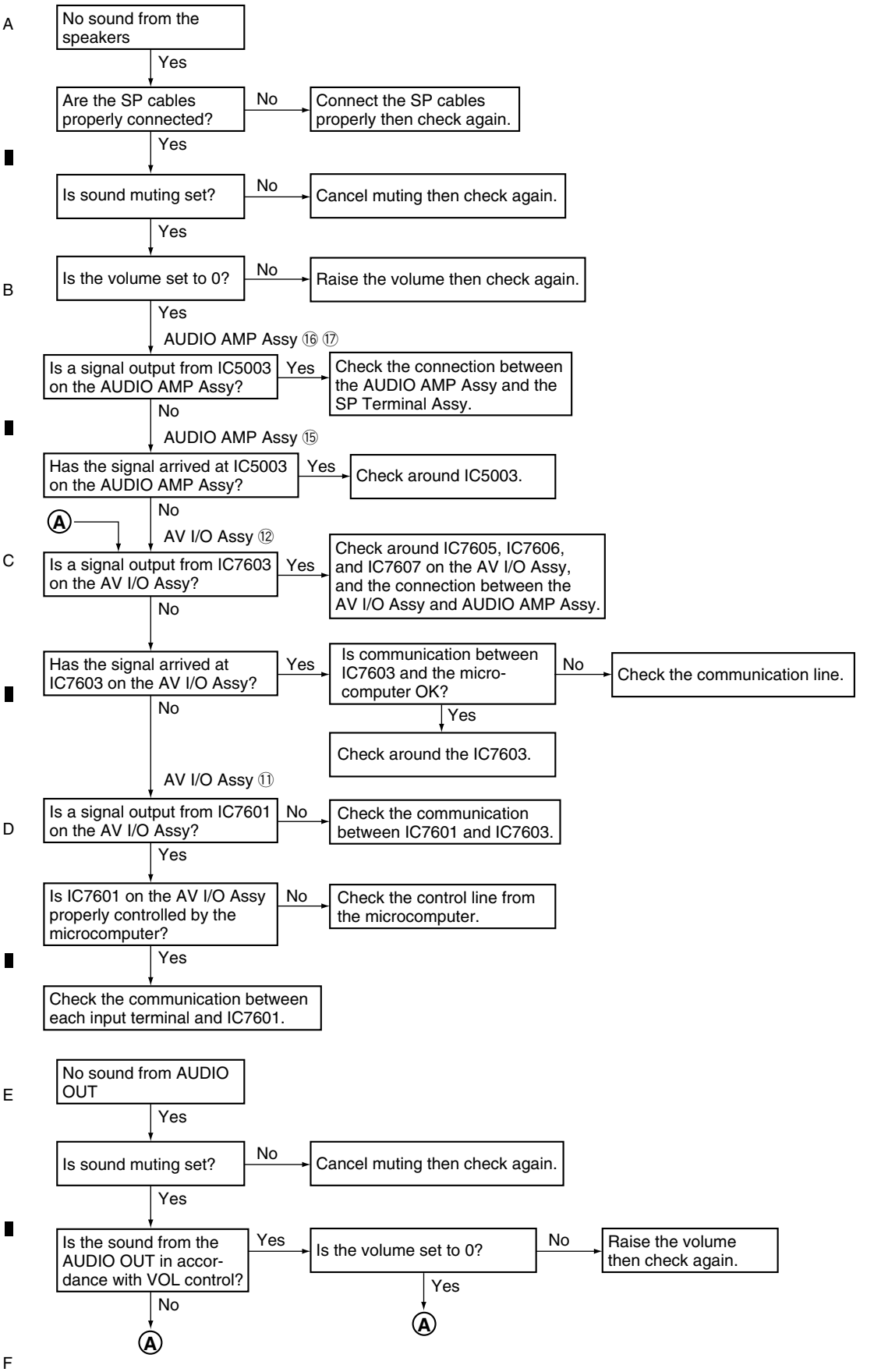
- The setting values for color temperature differ between Factory mode and Normal mode. Therefore, the setting value for color-difference signals in Normal mode are different from those in Factory mode, even after the White Balance adjustment has been performed.

7.1.7 TROUBLESHOOTING

Video



Audio


No sound from the speakers
Yes
Are the SP cables properly connected?
No
Connect the SP cables properly then check again.
Yes
Is sound muting set?
No
Cancel muting then check again.
Yes
Is the volume set to 0?
No
Raise the volume then check again.
Yes
AUDIO AMP Assy ⑯ ⑰
Is a signal output from IC5003 on the AUDIO AMP Assy?
Yes
Check the connection between the AUDIO AMP Assy and the SP Terminal Assy.
No
AUDIO AMP Assy ⑮
Has the signal arrived at IC5003 on the AUDIO AMP Assy?
Yes
Check around IC5003.
No
Ⓐ
AV I/O Assy ⑫
Is a signal output from IC7603 on the AV I/O Assy?
Yes
Check around IC7605, IC7606, and IC7607 on the AV I/O Assy, and the connection between the AV I/O Assy and AUDIO AMP Assy.
No
Has the signal arrived at IC7603 on the AV I/O Assy?
Yes
Is communication between IC7603 and the micro-computer OK?
No
Check the communication line.
Yes
Check around the IC7603.
No
AV I/O Assy ⑪
Is a signal output from IC7601 on the AV I/O Assy?
No
Check the communication between IC7601 and IC7603.
Yes
Is IC7601 on the AV I/O Assy properly controlled by the microcomputer?
No
Check the control line from the microcomputer.
Yes
Check the communication between each input terminal and IC7601.
No sound from AUDIO OUT
Yes
Is sound muting set?
No
Cancel muting then check again.
Yes
Is the sound from the AUDIO OUT in accor-dance with VOL control?
Yes
Is the volume set to 0?
No
Raise the volume then check again.
Yes
Ⓐ
No
Ⓐ

7.1.8 DISASSEMBLY

1 Rear Case (43M), Front Case 434 (CMX)

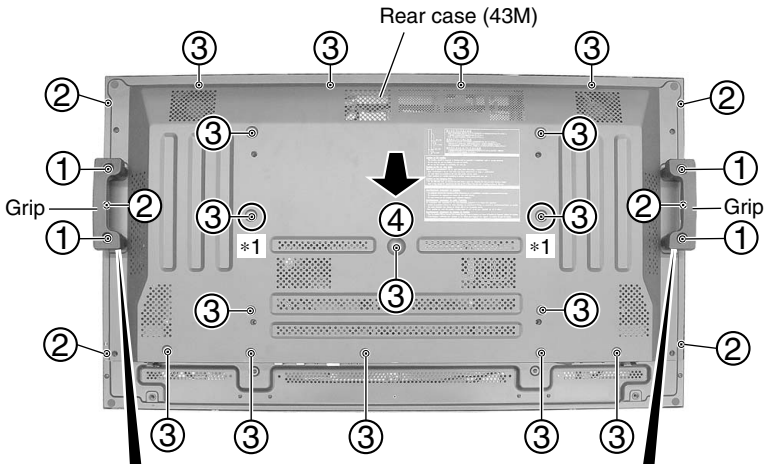
① Remove the grip by removing the four screws.

② Remove the six screws.

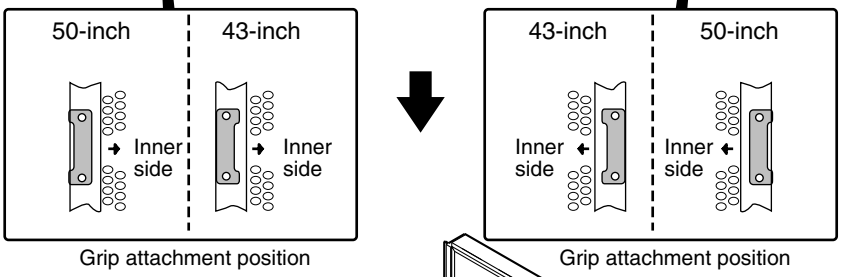
③ Remove the sixteen screws.

Note :
When reattaching the rear case (43M), first attach the screws for the holes indicated with ∗1 to place the rear case (43M) in the correct position.

④ Remove the rear case (43M).



Note:
- When reattaching the grip, be sure to securely tighten the screws.
- An installation direction of the grip of PDP-434CMX/ PDP-43MXE1 and PDP-43MXE1-S (43-inch) is different from PDP-504CMX/ PDP-50MXE1 and PDP-50MXE1-S (50-inch). (Refer to the right figure.)



⑤ Remove the three screws.

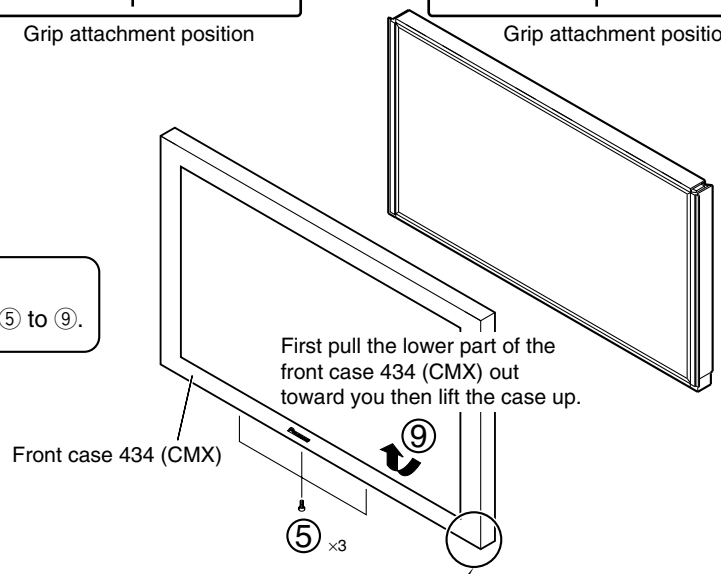
⑥ Remove the one rivet.

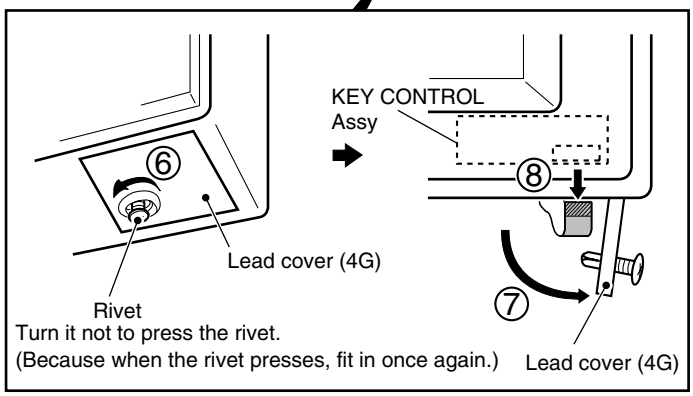
⑦ Remove the lead cover (4G).

⑧ Disconnect the flexible cable.

⑨ Remove the front case 434 (CMX).

Note:
If only the front case must be removed, without removing the rear case, perform the steps ⑤ to ⑨.

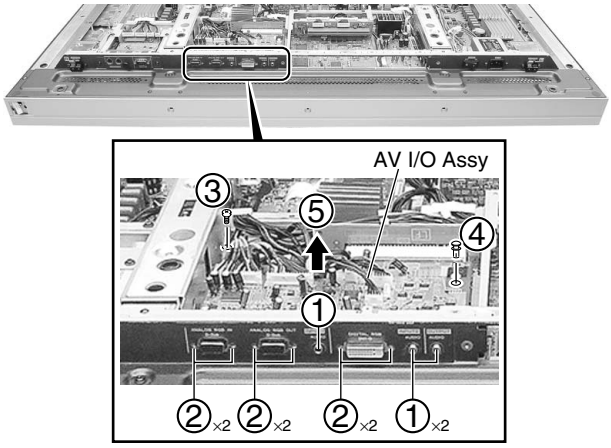




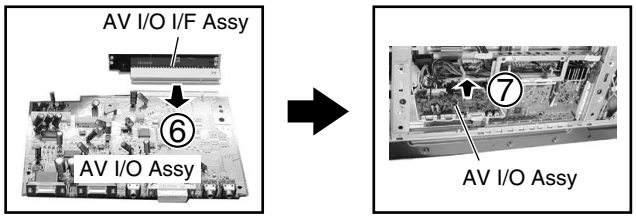
2 Multi Base Section

● Diagnosis of AV I/O Assy

① Remove the three nuts.
② Remove the six hexagonal screws.
③ Remove the one screw.
④ Remove the one pin grommet.
⑤ Remove the AV I/O Assy with the AV I/O I/F Assy.



⑥ Remove the AV I/O Assy from the AV I/O I/F Assy.
⑦ Connect the AV I/O Assy to slot of the RGB Assy.

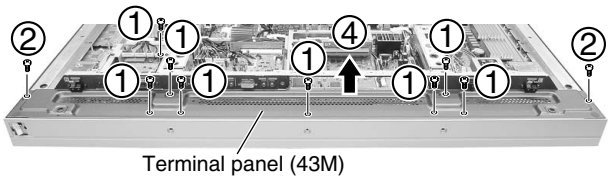


Diagnosis

Note:
The cooling fan may rotate during diagnosis, in the following cases:
- When the rotation speed of the fan has been set to maximum for Integrator mode
- When the ambient temperature surrounding the temperature sensor is 35˚C or higher

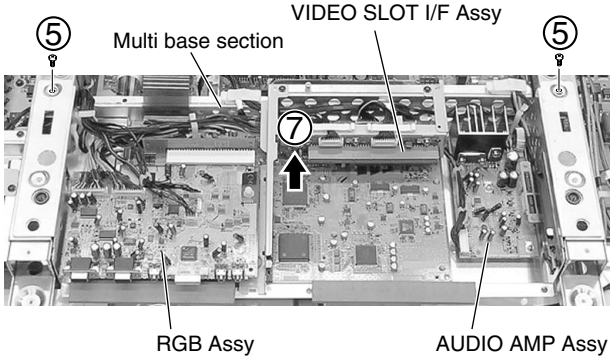
● Removing Multi Base Section

① Remove the eight screws.
② Remove the two screws.
③ Disconnect the some connectors at need.
④ Remove the terminal panel (43M).



Note:
Some tiny metal shavings may be released from the paring screw section when the VIDEO SLOT I/F Assy is detached from the sheet metal and is reattached to it. Be sure to clear away any shavings or other foreign matter before reattaching it to the RGB Assy.

⑤ Remove the two screws.
⑥ Disconnect the some connectors at need.
⑦ Remove the multi base section.



3 X CONNECTOR A Assy, B Assy, 43 SCAN A Assy and B Assy

● X CONNECTOR A and B Assy

① Remove the one nylon rivet.

② Remove the one screw.

Note: Be sure to remove this screw. If you don't, the connector on the LED OPT Assy may be damaged.

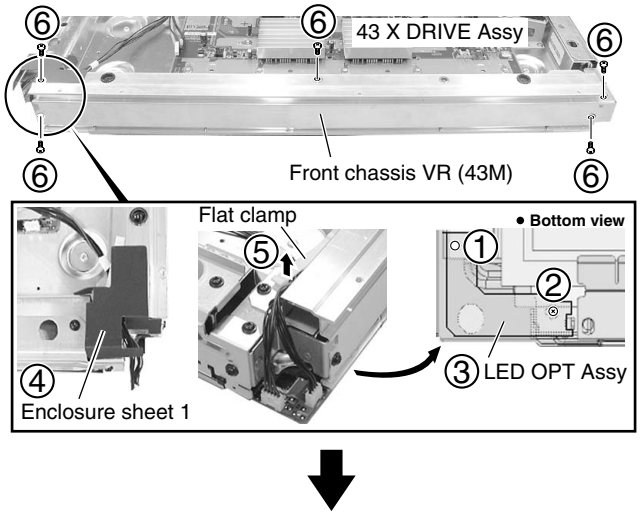
③ Remove the LED OPT Assy.

④ Remove the enclosure sheet 1.

Note:
Enclosure sheet 1 is attached to comply with the safety standards. Make sure that it will not be shifted or peeled off. If it is peeled off, securely reattach it in its original place.

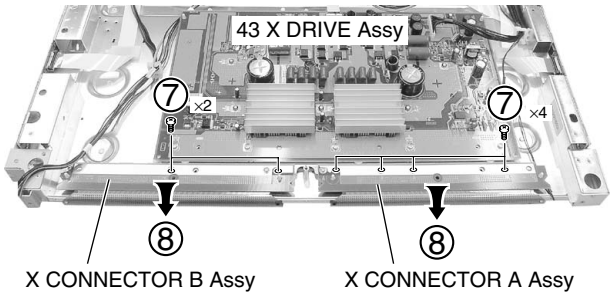
⑤ Remove the jumper wire by removing the flat clamp.

⑥ Remove the front chassis VR (43M) by removing the five screws.



⑦ Remove the six screws.

⑧ Remove the X CONNECTOR A and B Assy.



Note when reassembling the front chassis VR (43M)
Remove or loosen the screws that secure the panel holder in order not to damage the front protect panel Assy.

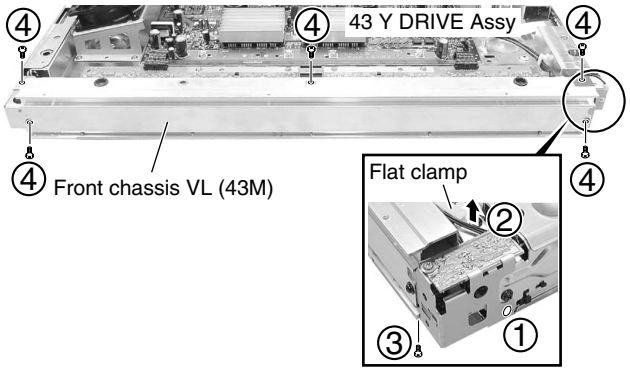
● 43 SCAN A and B Assy

① Remove the one nylon rivet.

② Remove the jumper wire by removing the flat clamp.

③ Remove the one screw.

④ Remove the front chassis VL (43M) by removing the five screws.



⑤ Remove the four screws.

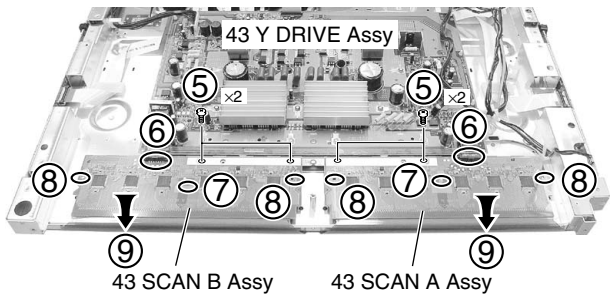
⑥ Disconnect the two pin connectors.

⑦ Remove the two spacers.

⑧ Remove the four spacers.

⑨ Remove the 43 SCAN A and B Assy.

Note when reassembling the front chassis VL (43M)
Remove or loosen the screws that secure the panel holder in order not to damage the front protect panel Assy.



7.2 IC INFORMATIION

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

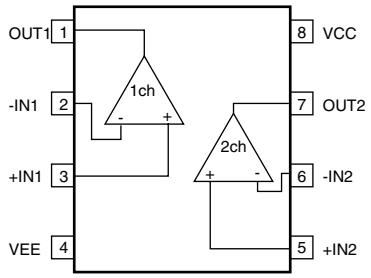
● **List of IC**

BA10393F, BA10358F, STK795-510, STK795-511, MBM29PL160BD-75PFTN, M30626FHPGP-P,PD5856A, AN5870SB, AD9883AKST-110, SM5301BS, BA7078AF, HY57V643220CT-7, MBM29PL3200BE70PFV,CXA3516R, SII1161BCTG100, LA4625

■ BA10393F (43 X DRIVE ASSY : IC1103) (43 Y DRIVE ASSY : IC2211)

• Comparator IC

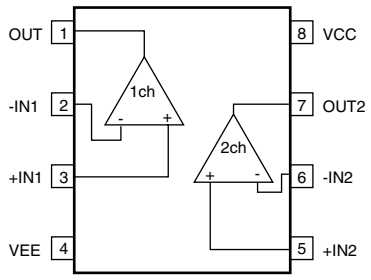
● **Pin Arrangement (Top View) / Block Diagram**



■ BA10358F (43 Y DRIVE ASSY : IC2406)

• Ope-Amp. IC

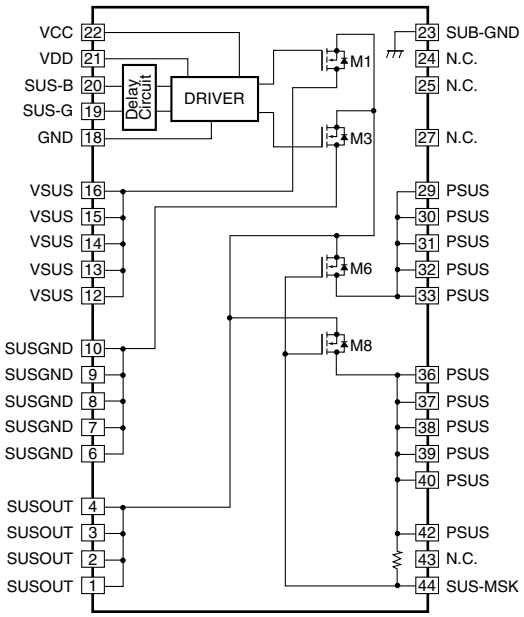
● **Pin Arrangement (Top View) / Block Diagram**



■ STK795-510 (43 X DRIVE ASSY: IC1203, IC1207)

• PDP Mask Module IC

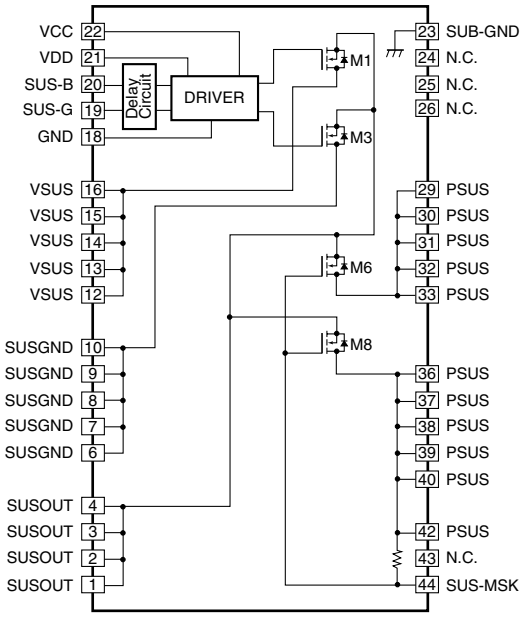
● Block Diagram



■ STK795-511 (43 Y DRIVE ASSY: IC2303, IC2307)

• PDP Mask Module IC

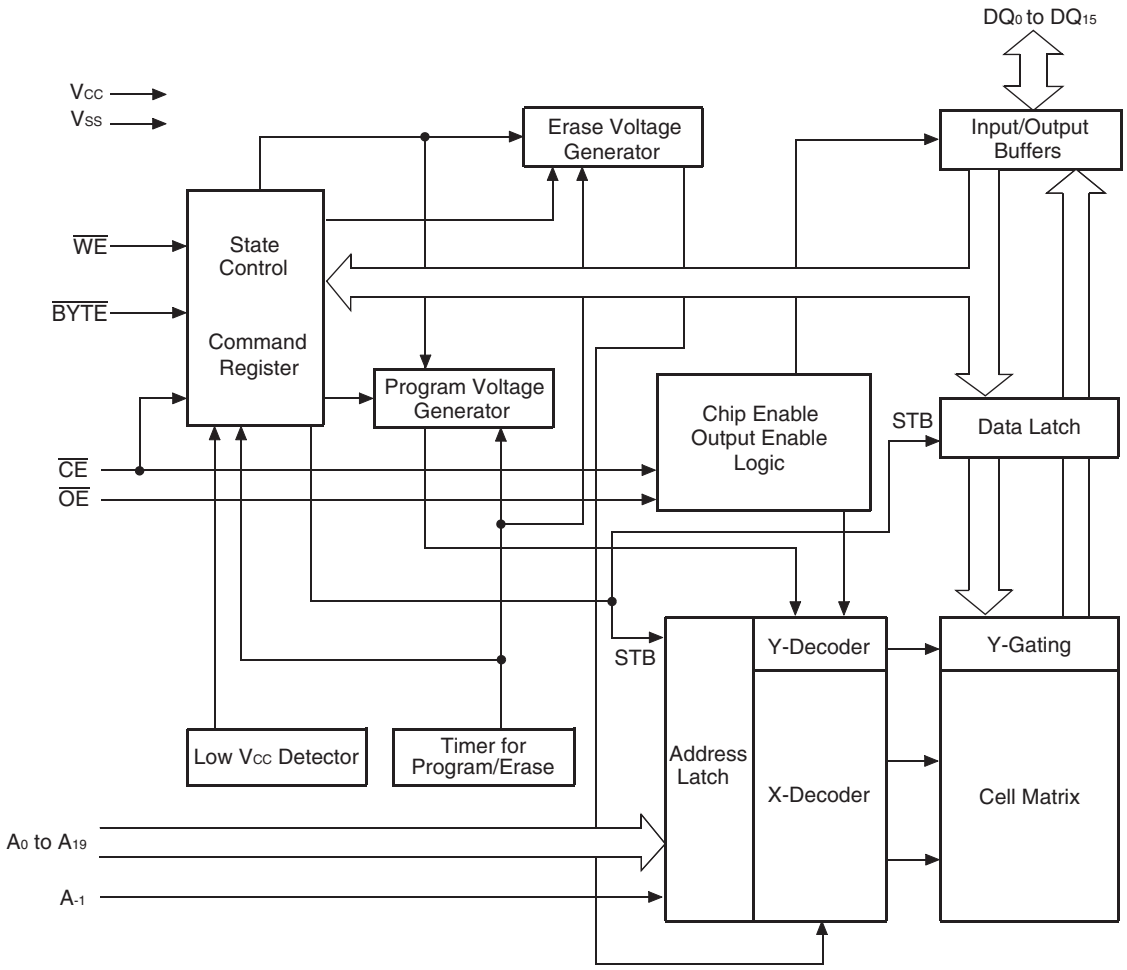
● Block Diagram



MBM29L160BD-75PFTN (DIGITAL VIDEO ASSY : IC5305)

• Flash Memory IC

● Block Diagram



M30626FHPGP-P (DIGITAL VIDEO ASSY : IC5201)

• PDP μCOM

● **Pin Function**

No.	Pin Name	Function	I/0	ACTIVE
1	VSUS	[D/A] Vofs power control	O	
2	VOFS	[D/A] Vofs power control	O	
3	TXD_IC4	3 serial communication with IC4MANTA - data transmission	O	
4	RXD_IC4	3 serial communication with IC4MANTA - data receive	I	
5	CLK_IC4	3 serial communication with IC4MANTA - clock output	O	
6	BYTE	(GND connection)	I	
7	CNVSS	Pin for processor mode setting (pull-down)	I	
8	NC	NC pin		
9	NC	NC pin		
10	RST_MD	Reset input	I	L
11	XOUT	Output for main clock	O	–
12	VSS	GND	–	–
13	XIN	Input for main clock	I	–
14	VCC1	Power supply = STB3.3V	–	–
15	NMI	(pull-up)	I	
16	REM_B	(Interruption) Remote control signal input (in the panel unit)	I	
17	KEY_B	(Interruption) Key signal input (in the panel unit)	I	
18	RST2	(Interruption) IC4 reset detection	I	L
19	HD_IN_B	HD signal existence distinction	I	L
20	PD_MUTE	Mute the power down output to the POWER SUPPLY Unit	O	L
21	PS_PD	PD signal in the POWER SUPPLY Unit	I	H
22	DCC_PD	PD signal of DC-DC converter	I	H
23	NC	NC pin		
24	NC	NC pin		
25	VD_IN	V. frequency count	I	L
26	EEPRST	EEPROM power SW	O	H
27	E_SCL	IIC clock output for EEPROM	O	
28	E_SDA	IIC data I/O for EEPROM	I/O	
29	TXD	Communication with flash ROM writer - data transmission	O	
30	RXD	Communication with flash ROM writer - data receive	I	
31	SCLK	Communication with flash ROM writer - clock input	I	
32	BUSY	Communication with flash ROM writer - busy output	O	
33	TXD0	UART communication with main UCOM (external PC) - data transmission	O	
34	RXD0	UART communication with main UCOM (external PC) - data receive	I	
35	NC	NC pin		
36	REQ_MD	Communication request to the main UCOM	O	H
37	PSW_D	Mute of DC-DC converter	O	H
38	WE_IC4	In IC4 (MANTA) rewriting, control for communication path switch	O	H
39	EPM	Setting pin for flash rewriting mode (pull-down)	I	
40	IC4_RST	IC4 forced reset	O	L
41	IC4_CE	Enable for IC4 communication	O	L
42	IC4_BUSY	Busy input for IC4 communication	I	H
43	REQ_IC4	Communication request from the IC4	I	H
44	CE	Setting pin for flash rewriting mode (pull-up)	I	
45	PSIZE	Panel size distinction	I	
46	B_SCL	IIC clock output for backup EEPROM	O	H
47	B_SDA	IIC DATA I/O for backup EEPROM	I/O	H
48	ADR_PD	PD signal of address junction	I	H
49	LED_G	Green LED control	O	L
50	LED_R	Red LED control	O	L

No.	Pin Name	Function	I/0	ACTIVE
51	DRV_OFF	Driving OFF	O	H
52	RELAY	Power ON control output	O	H
53	POWER	Power ON control input	I	H
54	MR_ST_B	MDR connection detection	I	L
55	OP_DET	Rear case open detection	I	
56	NC	NC pin		
57	PNL_MUTE	Panel mute	I	
58	DITHER	PC/VIDEO dither switch (panel module exclusive use)	I	
59	NC	NC pin		
60	VCC2	Power supply = STB 3.3V	–	–
61	PD_TRG	PD detection	I	L
62	VSS	GND	–	–
63	VH_PD	Vh power decrease PD	I	H
64	YDRV_PD	Y drive PD signal	I	H
65	YRES_PD	Y drive PD signal	I	H
66	YDCDC_PD	PD signal of Y drive DC-DC converter	I	H
67	IC5V_PD	5V power decrease PD	I	H
68	XSUS_PD	X drive PD signal	I	H
69	XDCDC_PD	PD signal of X drive DC-DC converter	I	H
70	XDRV_PD	X drive PD signal	I	H
71	NC	NC pin		
72	MR_AC	MR power monitor	I	H
73	AC_DET	AC power monitor at panel side (same signal as CST1)	I	L
74	DVI_MUTE	Mute of panel link output	O	H
75	A_MUTE	Audio mute	O	H
76	A_NG	Audio NG detection	I	L
77	A_SCL	IIC clock output for audio/others	O	L
78	A_SDA	IIC data I/O for audio/others	I/O	L
79	TRUBASS	TRUBASS ON/OFF	O	H
80	STB_SW	Standby setting of audio amp.	O	L
81	FOCUS	FOCUS ON/OFF	O	H
82	SRS	SRS ON/OFF	O	H
83	DDC_WP	DDCROM write protection	O	H
84	DVI_DET	DVI cable disconnection detection	I	H
85	RSTBTMDS	Reset detection of panel link receiver	I	L
86	L_SYNC	DE omission detection of the panel link	I	L
87	NC	NC pin		
88	NC	NC pin		
89	MASK1	[A/D] Mask display setting	I	
90	MAX_PLS2	[A/D] Brightness setting for panel module	I	
91	MAX_PLS1	[A/D] Brightness setting for panel module	I	
92	TEMP	[A/D] AD input for temperature sensor	I	
93	MODE	[A/D] Operation mode setting	I	
94	AVSS	GND for A/D input	–	–
95	MODEL	[A/D] CMX/HD/TV/WX distinction	I	
96	VREF	Reference voltage for A/D input	–	–
97	AVCC	Power supply for A/D input = STB3.3V	–	–
98	NC	NC pin		
99	NC	NC pin		
100	AMG_MD	Address emergency monitor	I	H

PD5856A (DIGITAL VIDEO ASSY : IC5401)

• PDP ASIC IC4

● Pin Function

Ball No.	No.	Pin Name	Function
A1	1	BAI_6	A phase signal input of B video (sixth bit)
B1	2	BAI_5	A phase signal input of B video (fifth bit)
C1	3	BAI_4	A phase signal input of B video (fourth bit)
D1	4	NC	NC pin
E1	5	NC	NC pin
F1	6	BAI_3	A phase signal input of B video (fifth bit)
G1	7	BAI_2	A phase signal input of B video (fourth bit)
H1	8	FIELD	FIELD signal input
J1	9	XSUSB_12	X-Drive control signal output
K1	10	XSUSB_10	X-Drive control signal output
L1	11	XSUSB_4	X-Drive control signal output
M1	12	XSUSB_0	X-Drive control signal output
N1	13	XSUSA_10	X-Drive control signal output
P1	14	XSUSA_4	X-Drive control signal output
R1	15	XSUSA_2	X-Drive control signal output
T1	16	ADRS_0	Address control signal output
U1	17	AD6TXOUT3M	Address LVDS signal output
V1	18	AD6TXCLKOUTM	Address LVDS signal output
W1	19	AD6TXOUT2M	Address LVDS signal output
Y1	20	AD6TXOUT1M	Address LVDS signal output
AA1	21	AD6TXOUT0M	Address LVDS signal output
AB1	22	AD7TXOUT3M	Address LVDS signal output
AC1	23	AD7TXCLKOUTM	Address LVDS signal output
AD1	24	AD7TXOUT2M	Address LVDS signal output
AE1	25	AD7TXOUT1M	Address LVDS signal output
AF1	26	AD7TXOUT0M	Address LVDS signal output
AF2	27	AD7TXOUT0P	Address LVDS signal output
AF3	28	VSSLA	GND
AF4	29	AD3TXOUT3M	Address LVDS signal output
AF5	30	AD3TXCLKOUTM	Address LVDS signal output
AF6	31	AD3TXOUT2M	Address LVDS signal output
AF7	32	AD3TXOUT1M	Address LVDS signal output
AF8	33	AD3TXOUT0M	Address LVDS signal output
AF9	34	AD2TXOUT3M	Address LVDS signal output
AF10	35	AD2TXCLKOUTM	Address LVDS signal output
AF11	36	AD2TXOUT2M	Address LVDS signal output
AF12	37	AD2TXOUT1M	Address LVDS signal output
AF13	38	AD2TXOUT0M	Address LVDS signal output
AF14	39	AD1TXOUT3M	Address LVDS signal output
AF15	40	AD1TXCLKOUTM	Address LVDS signal output
AF16	41	AD1TXOUT2M	Address LVDS signal output
AF17	42	AD1TXOUT1M	Address LVDS signal output
AF18	43	AD1TXOUT0M	Address LVDS signal output
AF19	44	AD0TXOUT3M	Address LVDS signal output
AF20	45	AD0TXCLKOUTM	Address LVDS signal output
AF21	46	AD0TXOUT2M	Address LVDS signal output
AF22	47	AD0TXOUT1M	Address LVDS signal output
AF23	48	AD0TXOUT0M	Address LVDS signal output
AF24	49	VSSL15	GND
AF25	50	AD4TXOUT3P	Address LVDS signal output

Ball No.	No.	Pin Name	Function
AF26	51	AD4TXOUT3M	Address LVDS signal output
AE26	52	AD4TXCLKOUTM	Address LVDS signal output
AD26	53	AD4TXOUT2M	Address LVDS signal output
AC26	54	AD4TXOUT1M	Address LVDS signal output
AB26	55	AD4TXOUT0M	Address LVDS signal output
AA26	56	AD5TXOUT3M	Address LVDS signal output
Y26	57	AD5TXCLKOUTM	Address LVDS signal output
W26	58	AD5TXOUT2M	Address LVDS signal output
V26	59	AD5TXOUT1M	Address LVDS signal output
U26	60	AD5TXOUT0M	Address LVDS signal output
T26	61	SDIDBI_N	JTAG signal
R26	62	SDIJTAG	JTAG signal
P26	63	GPIO0_3	Microcomputer macro general-purpose port
N26	64	GPIO0_1	Microcomputer macro general-purpose port
M26	65	YSUSA_4	Y-Drive control signal output
L26	66	YSUSA_10	Y-Drive control signal output
K26	67	YSUSA_14	Y-Drive control signal output
J26	68	YSUSB_4	Y-Drive control signal output
H26	69	YSUSB_6	Y-Drive control signal output
G26	70	YSUSB_10	Y-Drive control signal output
F26	71	YSUSB_14	Y-Drive control signal output
E26	72	NC	NC pin
D26	73	NC	NC pin
C26	74	SCAN_10	Scan control signal output
B26	75	CSIOTXD	Communication with microcomputer
A26	76	CSRD_N	Communication with microcomputer
A25	77	CSCS_N0	Communication with microcomputer
A24	78	EXA16	Flash memory address bus
A23	79	EXA15	Flash memory address bus
A22	80	EXA14	Flash memory address bus
A21	81	EXA13	Flash memory address bus
A20	82	EXA12	Flash memory address bus
A19	83	EXA10	Flash memory address bus
A18	84	EXA7	Flash memory address bus
A17	85	EXA1	Flash memory address bus
A16	86	EXDIO_3	Flash memory data bus
A15	87	EXDIO_5	Flash memory data bus
A14	88	EXDIO_11	Flash memory data bus
A13	89	TRNSEND_O	NC pin
A12	90	RBI_5	B phase signal input of R video (fifth bit)
A11	91	RBI_0	B phase signal input of R video (0 bit)
A10	92	GBI_8	B phase signal input of G video (eighth bit)
A9	93	GBI_2	B phase signal input of G video (second bit)
A8	94	BBI_6	B phase signal input of B video (sixth bit)
A7	95	BBI_0	B phase signal input of B video (0 bit)
A6	96	VDI	VD signal input
A5	97	RAI_5	A phase signal input of R video (fifth bit)
A4	98	DCLKI	CLK input
A3	99	GAI_4	A phase signal input of G video (fourth bit)
A2	100	BAI_9	A phase signal input of B video (ninth bit)

Ball No.	No.	Pin Name	Function
B2	101	BAI_8	A phase signal input of B video (eighth bit)
C2	102	BAI_7	A phase signal input of B video (seventh bit)
D2	103	GND	GND
E2	104	NC	NC
F2	105	NC	NC
G2	106	BAI_1	A phase signal input of B video (first bit)
H2	107	XSUSB_15	X-Drive control signal output
J2	108	GND	GND
K2	109	XSUSB_9	X-Drive control signal output
L2	110	XSUSB_3	X-Drive control signal output
M2	111	XSUSA_15	X-Drive control signal output
N2	112	XSUSA_9	X-Drive control signal output
P2	113	GND	GND
R2	114	XSUSA_1	X-Drive control signal output
T2	115	TEST2	Test signal input (Not used)
U2	116	AD6TXOUT3P	Address LVDS signal output
V2	117	AD6TXCLKOUTP	Address LVDS signal output
W2	118	AD6TXOUT2P	Address LVDS signal output
Y2	119	AD6TXOUT1P	Address LVDS signal output
AA2	120	AD6TXOUT0P	Address LVDS signal output
AB2	121	AD7TXOUT3P	Address LVDS signal output
AC2	122	AD7TXCLKOUTP	Address LVDS signal output
AD2	123	AD7TXOUT2P	Address LVDS signal output
AE2	124	AD7TXOUT1P	Address LVDS signal output
AE3	125	VSSLA	GND
AE4	126	AD3TXOUT3P	Address LVDS signal output
AE5	127	AD3TXCLKOUTP	Address LVDS signal output
AE6	128	AD3TXOUT2P	Address LVDS signal output
AE7	129	AD3TXOUT1P	Address LVDS signal output
AE8	130	AD3TXOUT0P	Address LVDS signal output
AE9	131	AD2TXOUT3P	Address LVDS signal output
AE10	132	AD2TXCLKOUTP	Address LVDS signal output
AE11	133	AD2TXOUT2P	Address LVDS signal output
AE12	134	AD2TXOUT1P	Address LVDS signal output
AE13	135	AD2TXOUT0P	Address LVDS signal output
AE14	136	AD1TXOUT3P	Address LVDS signal output
AE15	137	AD1TXCLKOUTP	Address LVDS signal output
AE16	138	AD1TXOUT2P	Address LVDS signal output
AE17	139	AD1TXOUT1P	Address LVDS signal output
AE18	140	AD1TXOUT0P	Address LVDS signal output
AE19	141	AD0TXOUT3P	Address LVDS signal output
AE20	142	AD0TXCLKOUTP	Address LVDS signal output
AE21	143	AD0TXOUT2P	Address LVDS signal output
AE22	144	AD0TXOUT1P	Address LVDS signal output
AE23	145	AD0TXOUT0P	Address LVDS signal output
AE24	146	VSSL15	GND
AE25	147	AD4TXCLKOUTP	Address LVDS signal output
AD25	148	AD4TXOUT2P	Address LVDS signal output
AC25	149	AD4TXOUT1P	Address LVDS signal output
AB25	150	AD4TXOUT0P	Address LVDS signal output

Ball No.	No.	Pin Name	Function
AA25	151	AD5TXOUT3P	Address LVDS signal output
Y25	152	AD5TXCLKOUTP	Address LVDS signal output
W25	153	AD5TXOUT2P	Address LVDS signal output
V25	154	AD5TXOUT1P	Address LVDS signal output
U25	155	AD5TXOUT0P	Address LVDS signal output
T25	156	SDITRST_N	JTAG signal
R25	157	RESETX	Reset input
P25	158	GND	GND
N25	159	GPIO0_0	Microcomputer macro general-purpose port
M25	160	YSUSA_5	Y-Drive control signal output
L25	161	YSUSA_11	Y-Drive control signal output
K25	162	YSUSA_15	Y-Drive control signal output
J25	163	GND	GND
H25	164	YSUSB_7	Y-Drive control signal output
G25	165	YSUSB_11	Y-Drive control signal output
F25	166	NC	NC pin
E25	167	NC	NC pin
D25	168	GND	GND
C25	169	SCAN_11	Scan control signal output
B25	170	CSIORXD	Communication with UCOM
B24	171	CSIOSCKI	Communication with UCOM
B23	172	UARTTXD	Communication with UCOM
B22	173	UARTRXD	Communication with UCOM
B21	174	CSWR_N0	Communication with UCOM
B20	175	GND	GND
B19	176	EXA9	Flash memory address bus
B18	177	EXA6	Flash memory address bus
B17	178	EXA0	Flash memory address bus
B16	179	GND	GND
B15	180	EXDIO_6	Flash memory data bus
B14	181	EXDIO_12	Flash memory data bus
B13	182	RBI_9	B phase signal input of R video (ninth bit)
B12	183	RBI_4	B phase signal input of R video (fourth bit)
B11	184	GND	GND
B10	185	GBI_7	B phase signal input of G video (seventh bit)
B9	186	GBI_1	B phase signal input of G video (first bit)
B8	187	BBI_5	B phase signal input of B video (fifth bit)
B7	188	GND	GND
B6	189	HDI	HD signal input
B5	190	RAI_4	A phase signal input of R video (fourth bit)
B4	191	GAI_9	A phase signal input of G video (ninth bit)
B3	192	GAI_3	A phase signal input of G video (third bit)
C3	193	GAI_2	A phase signal input of G video (second bit)
D3	194	VDDD33	3.3V power supply
E3	195	GAI_1	A phase signal input of G video (first bit)
F3	196	GAI_0	A phase signal input of G video (0 bit)
G3	197	NC	NC pin
H3	198	XSUSB_14	X-Drive control signal output
J3	199	VDDIO	3.3V power supply
K3	200	XSUSB_8	X-Drive control signal output

Ball No.	No.	Pin Name	Function
L3	201	XSUSB_2	X-Drive control signal output
M3	202	XSUSA_14	X-Drive control signal output
N3	203	XSUSA_8	X-Drive control signal output
P3	204	VDDIO	3.3V power supply
R3	205	XSUSA_0	X-Drive control signal output
T3	206	TEST1	Test signal input (Not used)
U3	207	VSSLA	GND
V3	208	VSSLA	GND
W3	209	VSSLA	GND
Y3	210	VSSLA	GND
AA3	211	VSSLA	GND
AB3	212	VSSLA	GND
AC3	213	VSSLA	GND
AD3	214	VSSLA	GND
AD4	215	VSSLA	GND
AD5	216	VSSLA	GND
AD6	217	VSSLA	GND
AD7	218	VSSLA	GND
AD8	219	VSSLA	GND
AD9	220	VSSLA	GND
AD10	221	VSSLA	GND
AD11	222	VSSLA	GND
AD12	223	VSSLA	GND
AD13	224	VSSLA	GND
AD14	225	VSSLA	GND
AD15	226	VSSLA	GND
AD16	227	VSSLA	GND
AD17	228	VSSLA	GND
AD18	229	VSSLA	GND
AD19	230	VSSLA	GND
AD20	231	VSSLA	GND
AD21	232	VSSLA	GND
AD22	233	VSSLA	GND
AD23	234	VSSLA	GND
AD24	235	VSSLA	GND
AC24	236	VSSLA	GND
AB24	237	VSSLA	GND
AA24	238	VSSLA	GND
Y24	239	VSSLA	GND
W24	240	VSSLA	GND
V24	241	VSSLA	GND
U24	242	VSSLA	GND
T24	243	SDITDO	JTAG signal
R24	244	GPIO0_7	Microcomputer macro general-purpose port
P24	245	VDDIO	3.3V power supply
N24	246	YSUSA_0	Y-Drive control signal output
M24	247	YSUSA_6	Y-Drive control signal output
L24	248	YSUSA_12	Y-Drive control signal output
K24	249	YSUSB_0	Y-Drive control signal output
J24	250	VDDD33	3.3V power supply

Ball No.	No.	Pin Name	Function
H24	251	YSUSB_8	Y-Drive control signal output
G24	252	NC	NC pin
F24	253	YSUSB_15	Y-Drive control signal output
E24	254	SCAN_3	Scan control signal output
D24	255	VDDD33	3.3V power supply
C24	256	SCAN_12	Scan control signal output
C23	257	SCAN_13	Scan control signal output
C22	258	SCAN_14	Scan control signal output
C21	259	SCAN_15	Scan control signal output
C20	260	VDDIO	3.3V power supply
C19	261	EXA8	Flash memory address bus
C18	262	EXA5	Flash memory address bus
C17	263	CLKD	CLK input (60MHz)
C16	264	VDDIO	3.3V power supply
C15	265	EXDIO_7	Flash memory data bus
C14	266	EXDIO_13	Flash memory data bus
C13	267	RBI_8	B phase signal input of R video (eighth bit)
C12	268	RBI_3	B phase signal input of R video (third bit)
C11	269	VDDIO	3.3V power supply
C10	270	GBI_6	B phase signal input of G video (sixth bit)
C9	271	GBI_0	B phase signal input of G video (0 bit)
C8	272	BBI_4	B phase signal input of B video (fourth bit)
C7	273	VDDIO	3.3V power supply
C6	274	RAI_9	A phase signal input of R video (ninth bit)
C5	275	RAI_3	A phase signal input of R video (third bit)
C4	276	GAI_8	A phase signal input of G video (eighth bit)
D4	277	GAI_7	A phase signal input of G video (seventh bit)
E4	278	GAI_6	A phase signal input of G video (sixth bit)
F4	279	GAI_5	A phase signal input of G video (fifth bit)
G4	280	VCMP	GND
H4	281	XSUSB_13	X-Drive control signal output
J4	282	XSUSB_11	X-Drive control signal output
K4	283	XSUSB_7	X-Drive control signal output
L4	284	XSUSB_1	X-Drive control signal output
M4	285	XSUSA_13	X-Drive control signal output
N4	286	XSUSA_7	X-Drive control signal output
P4	287	XSUSA_3	X-Drive control signal output
R4	288	ADRS_3	Address control signal output
T4	289	TESTAN	Test signal input (Not used)
U4	290	VDDLA	3.3V power supply
V4	291	VDDLA	3.3V power supply
W4	292	VDDLA	3.3V power supply
Y4	293	VDDLA	3.3V power supply
AA4	294	VDDLA	3.3V power supply
AB4	295	VDDLA	3.3V power supply
AC4	296	VDDLA	3.3V power supply
AC5	297	VDDLA	3.3V power supply
AC6	298	VDDLA	3.3V power supply
AC7	299	VDDLA	3.3V power supply
AC8	300	VDDLA	3.3V power supply

Ball No.	No.	Pin Name	Function
AC8	300	VDDLA	3.3V power supply
AC9	301	VDDLA	3.3V power supply
AC10	302	VDDLA	3.3V power supply
AC11	303	VDDLA	3.3V power supply
AC12	304	VDDLA	3.3V power supply
AC13	305	VDDLA	3.3V power supply
AC14	306	VDDBG	3.3V power supply
AC15	307	VDDLA	3.3V power supply
AC16	308	VDDLA	3.3V power supply
AC17	309	VDDLA	3.3V power supply
AC18	310	VDDLA	3.3V power supply
AC19	311	VDDLA	3.3V power supply
AC20	312	VDDLA	3.3V power supply
AC21	313	VDDLA	3.3V power supply
AC22	314	VDDLA	3.3V power supply
AC23	315	VDDLA	3.3V power supply
AB23	316	VDDLA	3.3V power supplyv
AA23	317	VDDLA	3.3V power supply
Y23	318	VDDLA	3.3V power supply
W23	319	VDDLA	3.3V power supply
V23	320	VDDLA	3.3V power supply
U23	321	VDDLA	3.3V power supply
T23	322	SDITDI	JTAG signal
R23	323	GPIO0_6	Microcomputer macro general-purpose port
P23	324	GPIO0_2	Microcomputer macro general-purpose port
N23	325	YSUSA_1	Y-Drive control signal output
M23	326	YSUSA_7	Y-Drive control signal output
L23	327	YSUSA_13	Y-Drive control signal output
K23	328	YSUSB_1	Y-Drive control signal output
J23	329	YSUSB_5	Y-Drive control signal output
H23	330	YSUSB_9	Y-Drive control signal output
G23	331	VCMP	GND
F23	332	SCAN_0	Scan control signal output
E23	333	SCAN_4	Scan control signal output
D23	334	SCAN_7	Scan control signal output
D22	335	SCAN_8	Scan control signal output
D21	336	SCAN_9	Scan control signal output
D20	337	EXA11	Flash memory address bus
D19	338	EXA19	Flash memory address bus
D18	339	EXA4	Flash memory address bus
D17	340	EXDIO_0	Flash memory data bus
D16	341	EXDIO_4	Flash memory data bus
D15	342	EXDIO_8	Flash memory data bus
D14	343	EXDIO_14	Flash memory data bus
D13	344	RBI_7	B phase signal input of R video (seventh bit)
D12	345	RBI_2	B phase signal input of R video (second bit)
D11	346	GBI_9	B phase signal input of G video (ninth bit)
D10	347	GBI_5	B phase signal input of G video (fifth bit)
D9	348	BBI_9	B phase signal input of B video (ninth bit)
D8	349	BBI_3	B phase signal input of B video (tenth bit)

Ball No.	No.	Pin Name	Function
D7	350	DEI	DE signal input
D6	351	RAI_8	A phase signal input of R video (eighth bit)
D5	352	RAI_2	A phase signal input of R video (second bit)
E5	353	RAI_1	A phase signal input of R video (first bit)
F5	354	RAI_0	A phase signal input of R video (0 bit)
G5	355	BAI_0	A phase signal input of B video (0 bit)
H5	356	VSS15	GND
J5	357	VDDHR	3.3V power supply
K5	358	XSUSB_6	X-Drive control signal output
L5	359	VSSD15	GND
M5	360	XSUSA_12	X-Drive control signal output
N5	361	XSUSA_6	X-Drive control signal output
P5	362	VSS15	GND
R5	363	ADRS_2	Address control signal output
T5	364	TESTBN	Test signal input (Not used)
U5	365	VSSL15	GND
V5	366	VSSLA	GND
W5	367	VSSLA	GND
Y5	368	VSSL15	GND
AA5	369	VDDLP	3.3V power supply
AB5	370	VSSL15	GND
AB6	371	VSSLA	GND
AB7	372	VSSLA	GND
AB8	373	VSSL15	GND
AB9	374	VSSLA	GND
AB10	375	VSSLA	GND
AB11	376	VSSL15	GND
AB12	377	VSSLA	GND
AB13	378	VSSLA	GND
AB14	379	REFRIN	Reference current generation
AB15	380	VSSBG	GND
AB16	381	VSSL15	GND
AB17	382	VSSLA	GND
AB18	383	VSSLA	GND
AB19	384	VSSL15	GND
AB20	385	VSSLA	GND
AB21	386	VSSLA	GND
AB22	387	VSSLA	GND
AA22	388	VDDLA	3.3V power supply
Y22	389	VSSL15	GND
W22	390	VSSLA	GND
V22	391	VSSLA	GND
U22	392	VSSL15	GND
T22	393	SDITMS	JTAG signal
R22	394	GPIO0_5	Microcomputer macro general-purpose port
P22	395	VSS15	GND
N22	396	YSUSA_2	Y-Drive control signal output
M22	397	YSUSA_8	Y-Drive control signal output
L22	398	VSSD15	GND
K22	399	YSUSB_2	Y-Drive control signal output

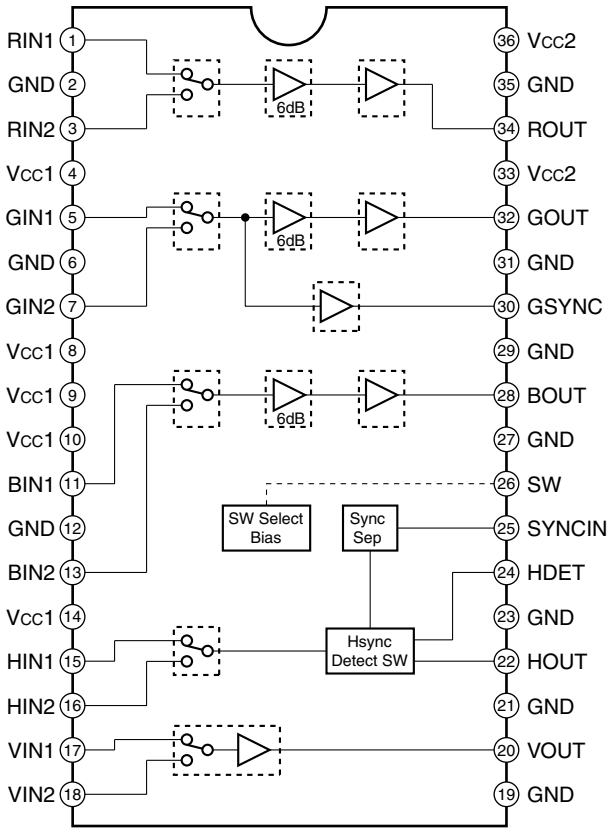
Ball No.	No.	Pin Name	Function
J22	400	VDDHL	3.3V power supply
H22	401	VSSD15	GND
G22	402	YSUSB_12	Y-Drive control signal output
F22	403	SCAN_1	Scan control signal output
E22	404	SCAN_5	Scan control signal output
E21	405	SCAN_6	Scan control signal output
E20	406	VSS15	GND
E19	407	EXA18	Flash memory address bus
E18	408	EXA3	Flash memory address bus
E17	409	EXDIO_1	Flash memory data bus
E16	410	VSS15	GND
E15	411	EXDIO_9	Flash memory data bus
E14	412	EXDIO_15	Flash memory data bus
E13	413	RBI_6	B phase signal input of R video (sixth bit)
E12	414	CLKS	CLK input (85MHz)
E11	415	VSS15	GND
E10	416	GBI_4	B phase signal input of G video (fourth bit)
E8	418	BBI_2	B phase signal input of B video (second bit)
E9	417	BBI_8	B phase signal input of B video (eighth bit)
E7	419	VSS15	GND
E6	420	RAI_7	A phase signal input of R video (seventh bit)
F6	421	RAI_6	A phase signal input of R video (sixth bit)
G6	422	APL_DT	APL value trigger input
H6	423	VDD15	1.5V power supply
J6	424	VBB	VBB power monitor in the DRAM
K6	425	XSUSB_5	X-Drive control signal output
L6	426	VDDD15	1.5V power supply
M6	427	XSUSA_11	X-Drive control signal output
N6	428	XSUSA_5	X-Drive control signal output
P6	429	VDD15	1.5V power supply
R6	430	ADRS_1	Address control signal output
T6	431	TESTCN	Test signal input (Not used)
U6	432	VDDL15	1.5V power supply
V6	433	VDDLA	3.3V power supply
W6	434	VDDLA	3.3V power supply
Y6	435	VDDL15	1.5V power supply
AA6	436	VDDLA	3.3V power supply
AA7	437	VDDLA	3.3V power supply
AA8	438	VDDL15	1.5V power supply
AA9	439	VDDLA	3.3V power supply
AA10	440	VDDLA	3.3V power supply
AA11	441	VDDL15	1.5V power supply
AA12	442	VDDLA	3.3V power supply
AA13	443	VDDLA	3.3V power supply
AA14	444	VDDLA	3.3V power supply
AA15	445	VDDLA	3.3V power supply
AA16	446	VDDL15	1.5V power supply
AA17	447	VDDLA	3.3V power supply
AA18	448	VDDLA	3.3V power supply
AA19	449	VDDL15	1.5V power supply

Ball No.	No.	Pin Name	Function
AA20	450	VDDLA	3.3V power supply
AA21	451	VDDLA	3.3V power supply
Y21	452	VDDL15	1.5V power supply
W21	453	VDDLA	3.3V power supply
V21	454	VDDLA	3.3V power supply
U21	455	VDDL15	1.5V power supply
T21	456	SDITCK	JTAG signal
R21	457	GPIO0_4	Microcomputer macro general-purpose port
P21	458	VDD15	1.5V power supply
N21	459	YSUSA_3	Y-Drive control signal output
M21	460	YSUSA_9	Y-Drive control signal output
L21	461	VDDD15	1.5V power supply
K21	462	YSUSB_3	Y-Drive control signal output
J21	463	VBB	VBB power monitor in the DRAM
H21	464	VDDD15	1.5V power supply
G21	465	YSUSB_13	Y-Drive control signal output
F21	466	SCAN_2	Scan control signal output
F20	467	VDD15	1.5V power supply
F19	468	EXA17	Flash memory address bus
F18	469	EXA2	Flash memory address bus
F17	470	EXDIO_2	Flash memory data bus
F16	471	VDD15	1.5V power supply
F15	472	EXDIO_10	Flash memory data bus
F14	473	TRNSEND_I	NC pin
F13	474	VDD15	1.5V power supply
F12	475	RBI_1	B phase signal input of R video (first bit)
F11	476	VDD15	1.5V power supply
F10	477	GBI_3	B phase signal input of G video (third bit)
F9	478	BBI_7	B phase signal input of B video (seventh bit)
F8	479	BBI_1	B phase signal input of B video (first bit)
F7	480	VDD15	1.5V power supply

■ AN5870SB (RGB ASSY : IC6402) (AV I/O ASSY : IC7610, IC7613) (VIDEO SLOT1 ASSY : IC7902) (VIDEO SLOT2 ASSY : IC7902)

- Wide Band Analog SW

● Pin Arrangement / Block Diagram



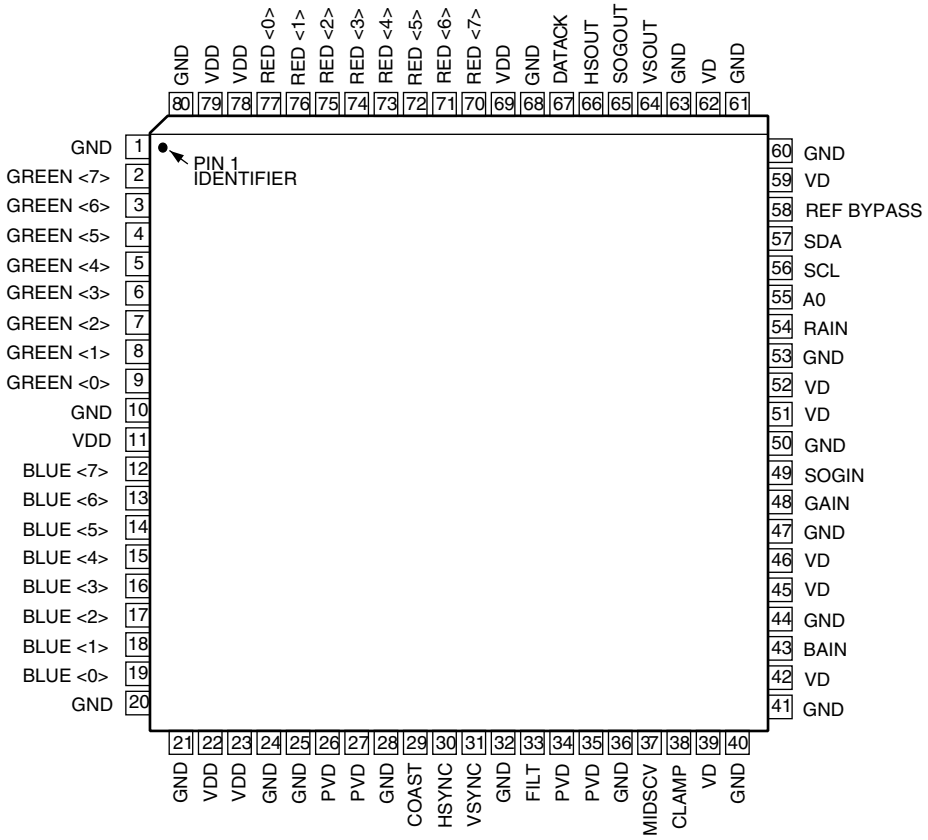
● Pin Function

No.	Name	Function	No.	Name	Function
1	RIN1	R input 1	19	GND	Ground (HV, HSEP, SW)
2	GND	Ground (R)	20	VOUT	V output
3	RIN2	R input 2	21	GND	Ground
4	Vcc1	5V (GSYNC)	22	HOUT	H output
5	GIN1	G input 1	23	GND	Ground
6	GND	Ground (G)	24	HDET	H detect
7	GIN2	G input 2	25	SYNCIN	Sync input
8	Vcc1	5V (R)	26	SW	SW
9	Vcc1	5V (G)	27	GND	Ground
10	Vcc1	5V (B)	28	BOUT	B output
11	BIN1	B input 1	29	GND	Ground (RGB)
12	GND	Ground (B)	30	GSYNC	GSync output
13	BIN2	B input 2	31	GND	Ground (RGB)
14	Vcc1	5V (HV, HSEP, SW)	32	GOUT	G output
15	HIN1	H input 1	33	Vcc2	12V (RGB)
16	HIN2	H input 2	34	ROUT	R output
17	VIN1	V input 1	35	GND	Ground
18	VIN2	V input 2	36	Vcc2	12V (RGB)

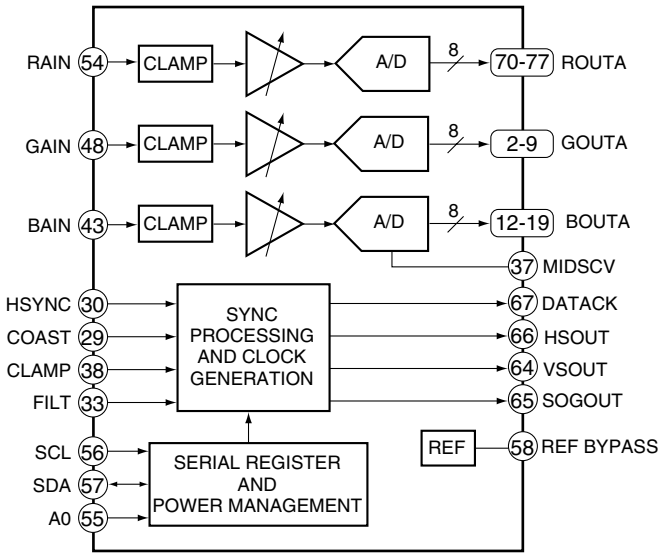
AD9883AKST-110 (RGB ASSY : IC6602)

• 110 MSPS Analog Interface

● Pin Arrangement (Top View)



● Block Diagram



● **Pin Function**

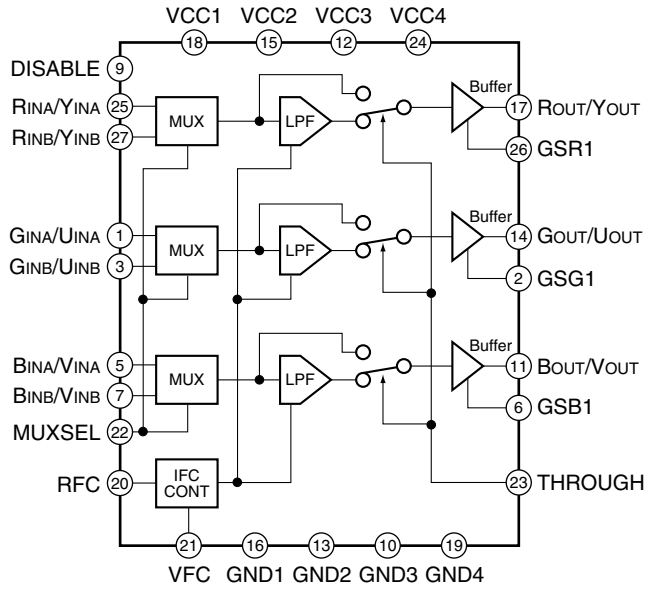
No.	Pin Name	I/O	Pin Function
1	GND	–	Ground
2	GREEN 7	O	Converter Green output (MSB)
3	GREEN 6	O	Converter Green output
4	GREEN 5	O	Converter Green output
5	GREEN 4	O	Converter Green output
6	GREEN 3	O	Converter Green output
7	GREEN 2	O	Converter Green output
8	GREEN 1	O	Converter Green output
9	GREEN 0	O	Converter Green output
10	GND	–	Ground
11	VDD	–	Power supply (3.3V)
12	BLUE 7	O	Converter Blue output (MSB)
13	BLUE 6	O	Converter Blue output
14	BLUE 5	O	Converter Blue output
15	BLUE 4	O	Converter Blue output
16	BLUE 3	O	Converter Blue output
17	BLUE 2	O	Converter Blue output
18	BLUE 1	O	Converter Blue output
19	BLUE 0	O	Converter Blue output
20	GND	–	Ground
21	GND	–	Ground
22	VDD	–	Power supply (3.3V)
23	VDD	–	Power supply (3.3V)
24	GND	–	Ground
25	GND	–	Ground
26	PVD	–	PLL power supply (3.3V)
27	PVD	–	PLL power supply (3.3V)
28	GND	–	Ground
29	COAST	I	PLL COAST signal input
30	HSYNC	I	Horizontal sync. input
31	VSYNC	I	Vertical sync. input
32	GND	–	Ground
33	FILT	–	External filter connection pin for built-in PLL
34	PVD	–	PLL power supply (3.3V)
35	PVD	–	PLL power supply (3.3V)
36	GND	–	Ground
37	MIDSCV	–	Internal middle scale voltage bias
38	CLAMP	I	Clamp input (External clamp signal)
39	VD	–	Analog power supply (3.3V)
40	GND	–	Ground
41	GND	–	Ground
42	VD	–	Analog power supply (3.3V)
43	BAIN	I	Analog input for converter B
44	GND	–	Ground
45	VD	–	Analog power supply (3.3V)

No.	Pin Name	I/O	Pin Function
46	VD	–	Analog power supply (3.3V)
47	GND	–	Ground
48	GAIN	I	Analog input for converter G
49	SOGIN	I	Input for Sync-on Green
50	GND	–	Ground
51	VD	–	Analog power supply (3.3V)
52	VD	–	Analog power supply (3.3V)
53	GND	–	Ground
54	RAIN	I	Analog input for converter R
55	A0	I	Address input 1 of serial port
56	SCL	I	Data clock (max. 100kHz) of serial port
57	SDA	I/O	Data input/output of serial port
58	REF BYPASS	–	Internal reference bypass
59	VD	–	Analog power supply (3.3V)
60	GND	–	Ground
61	GND	–	Ground
62	VD	–	Analog power supply (3.3V)
63	GND	–	Ground
64	VSOUT	O	VSYNC output (phasing with DATACLK)
65	SOGOUT	O	Sync-on-Green slicer output
66	HSOUT	O	HSYNC output (phasing with DATACLK)
67	DATACLK	O	Data input/output clock
68	GND	–	Ground
69	VDD	–	Power supply (3.3V)
70	RED 7	O	Converter Red output (MSB)
71	RED 6	O	Converter Red output
72	RED 5	O	Converter Red output
73	RED 4	O	Converter Red output
74	RED 3	O	Converter Red output
75	RED 2	O	Converter Red output
76	RED 1	O	Converter Red output
77	RED 0	O	Converter Red output
78	VDD	–	Power supply (3.3V)
79	VDD	–	Power supply (3.3V)
80	GND	–	Ground

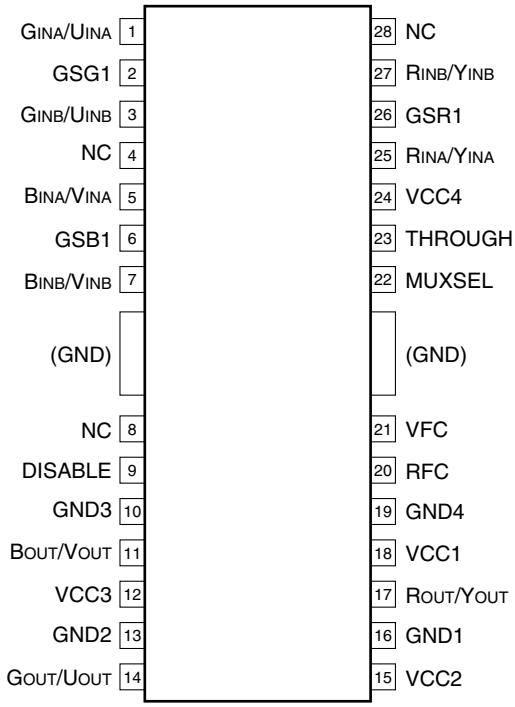
SM5301BS (RGB ASSY : IC6601)

• Video Filter

● Block Diagram



● Pin Arrangement (Top View)



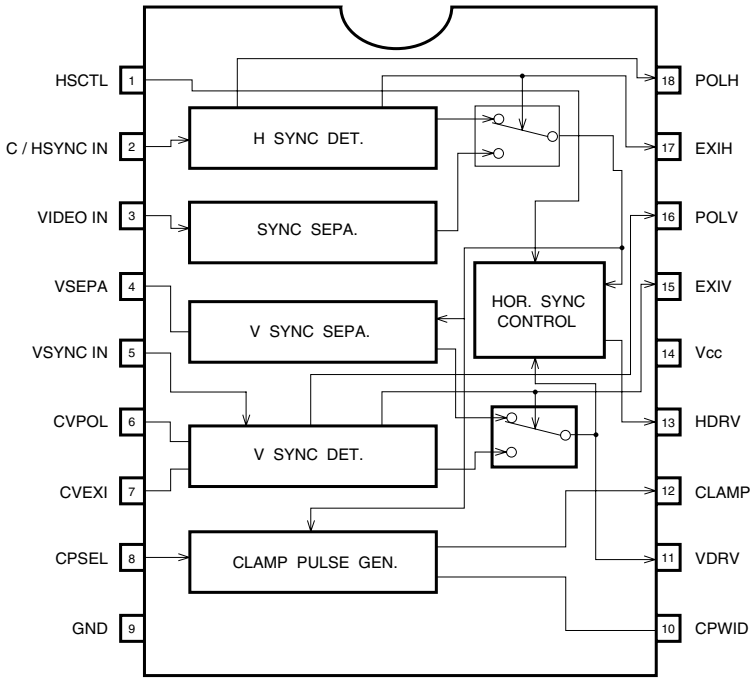
● Pin Function

No.	Pin Name	I/O	Pin Function
1	GINA/UINA	I	Analog GINA or UINA signal input. Sync signal is input on SYNCIN pin.
2	GSG1	I	GOUT/UOUT output buffer gain set input
3	GINB/UINB	I	Analog GINB or UINB signal input. Sync signal is input on SYNCIN pin.
4	(NC)	–	No connection
5	BINA/VINA	I	Analog BINA or VINA signal input. Sync signal is input on SYNCIN pin.
6	GSB1	I	BOUT/VOUT output buffer gain set input
7	BINB/VINB	I	Analog BINB or VINB signal input. Sync signal is input on SYNCIN pin.
8	(NC)	–	No connection
9	DISABLE	I	Power save function. Built-in pull-down resistor. L : Enable H : Disable (Output pins: ROUT/YOUT, GOUT/UOUT, and BOUT/VOUT are high impedance.)
10	GND3	–	Analog ground
11	BOUT/VOUT	O	B/V signal output
12	VCC3	–	Analog 5V supply
13	GND2	–	Analog ground
14	GOUT/UOUT	O	G/U signal output
15	VCC2	–	Analog 5V supply
16	GND1	–	Analog ground
17	ROUT/YOUT	O	R/Y signal output
18	VCC1	–	Analog 5V supply
19	GND4	–	Analog ground
20	RFC	–	LPF (lowpass filter) cutoff frequency setting resistor connection
21	VFC	I	LPF (lowpass filter) cutoff frequency setting voltage input
22	MUXSEL	I	Input select signal. Built-in pull-down resistor. L : XINA pin select H : XINB pin select
23	THROUGH	I	Filter through Built-in pull-down resistor. L : Filter function H : Filter through (buffer only)
24	VCC4	–	Analog 5V supply
25	RINA/YINA	I	Analog RINA or YINA signal input. Sync signal is input on SYNCIN pin.
26	GSR1	I	ROUT/YOUT output buffer gain set input
27	RINB/YINB	I	Analog RINB or YINB signal input. Sync signal is input on SYNCIN pin.
28	(NC)	–	No connection

■ BA7078AF (RGB ASSY : IC6604)

• Synchonous seperation IC

● Block Diagram



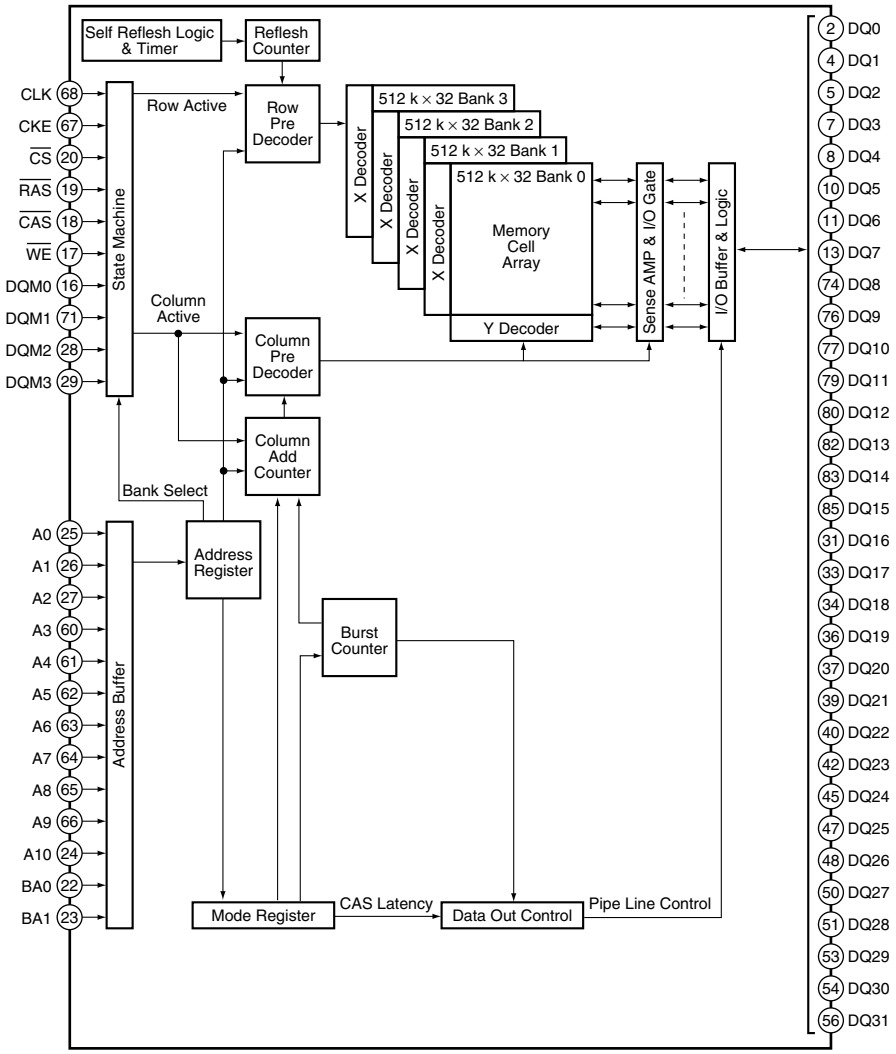
● Pin Function

No.	Pin Name	Pin Function
1	HSCTL	HDRV output Used to select whether to output the VDRV section of the HDRV output signal. High : VDRV section of HDRV is output Low : VDRV section of HDRV is not output
2	C/HSYNC IN	Composite sync / H SYNC input Input either the composite synchronization signal or the horizontal synchronization signal. Input is clamped, and is initiated by capacitor coupling.
3	VIDEO IN	SYNC ON VIDEO input Inputs the SYNC ON VIDEO signal(green). Input is sink chip clamped. Input is initiated by capacitor coupling.
4	VSEPA	f-V conversion Converts the horizontal synchronization signal frequency into a voltage. The voltage generated is proportional to the frequency of the horizontal synchronization signal. Attach a 0.56 μF capacitor between the ground pins.
5	VSYNC IN	V SYNC input Inputs the vertical synchronization signal.
6	CVPOL	Vertical polarity integration Integrates the vertical synchronization signal polarity detection circuit. Attach a 1.5 μF capacitor between this pin and the ground.
7	CVEXI	Vertical existence integration Integrates the vertical synchronization signal existence detection circuit. Attach a 1 μF capacitor between this pin and the ground.
8	CPSEL	Setting the clamp position Used to set the clamp pulse generation position to either the front or back edge of HSYNC High : The front edge is the generation position Open : Composite / H SYNC IN : The front edge is the generation position VIDEO IN : The back edge is the generation position Low : The back edge is the generation position
9	GND	Ground
10	CPWID	Setting the clamp pulse width Sets the clamp pulse width according to the attached time constant. Attach a resistor between this pin and VCC and, a capacitor between this pin and GND. When R = 3.9kΩ and C = 100pF, pulse width is approximately 400 ns. Set the resistor to register an abnormality at 1kΩ.
11	VDRV	VDRV output Outputs the vertical synchronization signal. The output signal has positive polarity.
12	CLAMP	Clamp output Outputs the clamp pulse generated from the vertical synchronization signal. The output signal has a positive polarity.
13	HDRV	HDRV output Outputs the clamp pulse generated from the horizontal synchronization signal. The output signal has positive polarity.
14	Vcc	Power supply
15	EXIV	Vertical existence output Indecates whether the vertical synchronization signal exists.
16	POLV	Vertical polarity output Indicates the polarity of the vertical synchronization signal.
17	EXIH	Horizontal existence output Indicates whether the horizontal synchronization signal exists.
18	POLH	Horizontal polarity output Indicates the polarity of the horizontal synchronization signal.

HY57V643220CT-7 (RGB ASSY : IC7001, IC7002)

• Synchronous DRAM

● Block Diagram



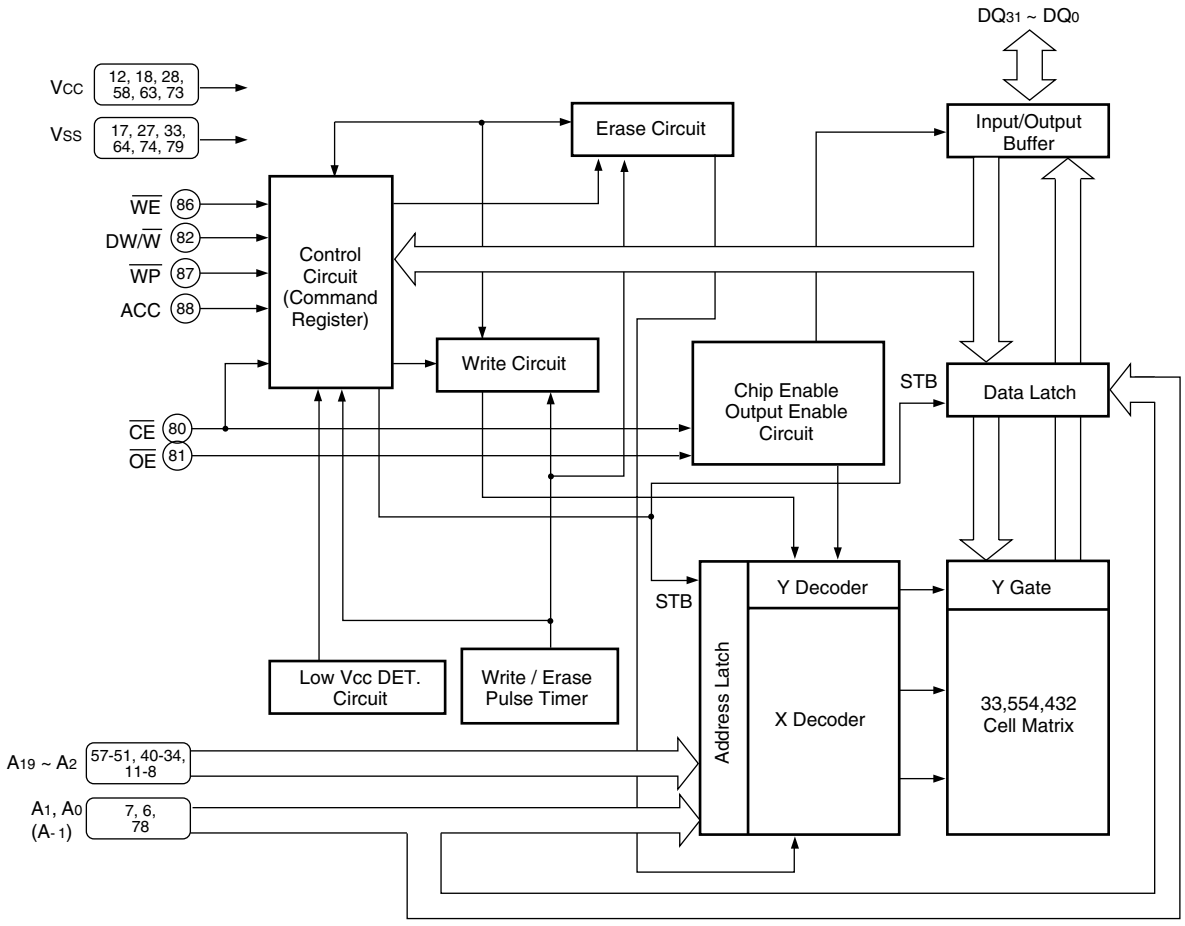
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply	44	VSS	–	Ground
2	DQ0	I/O	Data input/output	45	DQ24	I/O	Data input/output
3	VDDQ	–	Power supply for output buffer	46	VSSQ	–	Ground for output buffer
4	DQ1	I/O	Data input/output	47	DQ25	I/O	Data input/output
5	DQ2	I/O	Data input/output	48	DQ26	I/O	Data input/output
6	VSSQ	–	Ground for output buffer	49	VDDQ	–	Power supply for output buffer
7	DQ3	I/O	Data input/output	50	DQ27	I/O	Data input/output
8	DQ4	I/O	Data input/output	51	DQ28	I/O	Data input/output
9	VDDQ	–	Power supply for output buffer	52	VSSQ	–	Ground for output buffer
10	DQ5	I/O	Data input/output	53	DQ29	I/O	Data input/output
11	DQ6	I/O	Data input/output	54	DQ30	I/O	Data input/output
12	VSSQ	–	Ground for output buffer	55	VDDQ	–	Power supply for output buffer
13	DQ7	I/O	Data input/output	56	DQ31	I/O	Data input/output
14	NC	–	No connection	57	NC	–	No connection
15	VDD	–	Power supply	58	VSS	–	Ground
16	DQM0	I	Data input/output mask	59	DQM3	I	Data input/output mask
17	/WE	I	Write enable	60	A3	I	Address input
18	/CAS	I	Column address strobe	61	A4	I	Address input
19	/RAS	I	Row address strobe	62	A5	I	Address input
20	/CS	I	Chip select input	63	A6	I	Address input
21	NC	–	No connection	64	A7	I	Address input
22	BA0	I	Bank address input	65	A8	I	Address input
23	BA1	I	Bank address input	66	A9	I	Address input
24	A10/AP	I	Address input	67	CKE	I	Clock enable
25	A0	I	Address input	68	CLK	I	System clock input
26	A1	I	Address input	69	NC	–	No connection
27	A2	I	Address input	70	NC	–	No connection
28	DQM2	I	Data input/output mask	71	DQM1	I	Data input/output mask
29	VDD	–	Power supply	72	VSS	–	Ground
30	NC	–	No connection	73	NC	–	No connection
31	DQ16	I/O	Data input/output	74	DQ8	I/O	Data input/output
32	VSSQ	–	Ground for output buffer	75	VDDQ	–	Power supply for output buffer
33	DQ17	I/O	Data input/output	76	DQ9	I/O	Data input/output
34	DQ18	I/O	Data input/output	77	DQ10	I/O	Data input/output
35	VDDQ	–	Power supply for output buffer	78	VSSQ	–	Ground for output buffer
36	DQ19	I/O	Data input/output	79	DQ11	I/O	Data input/output
37	DQ20	I/O	Data input/output	80	DQ12	I/O	Data input/output
38	VSSQ	–	Ground for output buffer	81	VDDQ	–	Power supply for output buffer
39	DQ21	I/O	Data input/output	82	DQ13	I/O	Data input/output
40	DQ22	I/O	Data input/output	83	DQ14	I/O	Data input/output
41	VDDQ	–	Power supply for output buffer	84	VSSQ	–	Ground for output buffer
42	DQ23	I/O	Data input/output	85	DQ15	I/O	Data input/output
43	VDD	–	Power supply	86	VSS	–	Ground

■ MBM29PL3200BE70PFV (RGB ASSY : IC7152)

• Page Mode Flash Memory

● Block Diagram



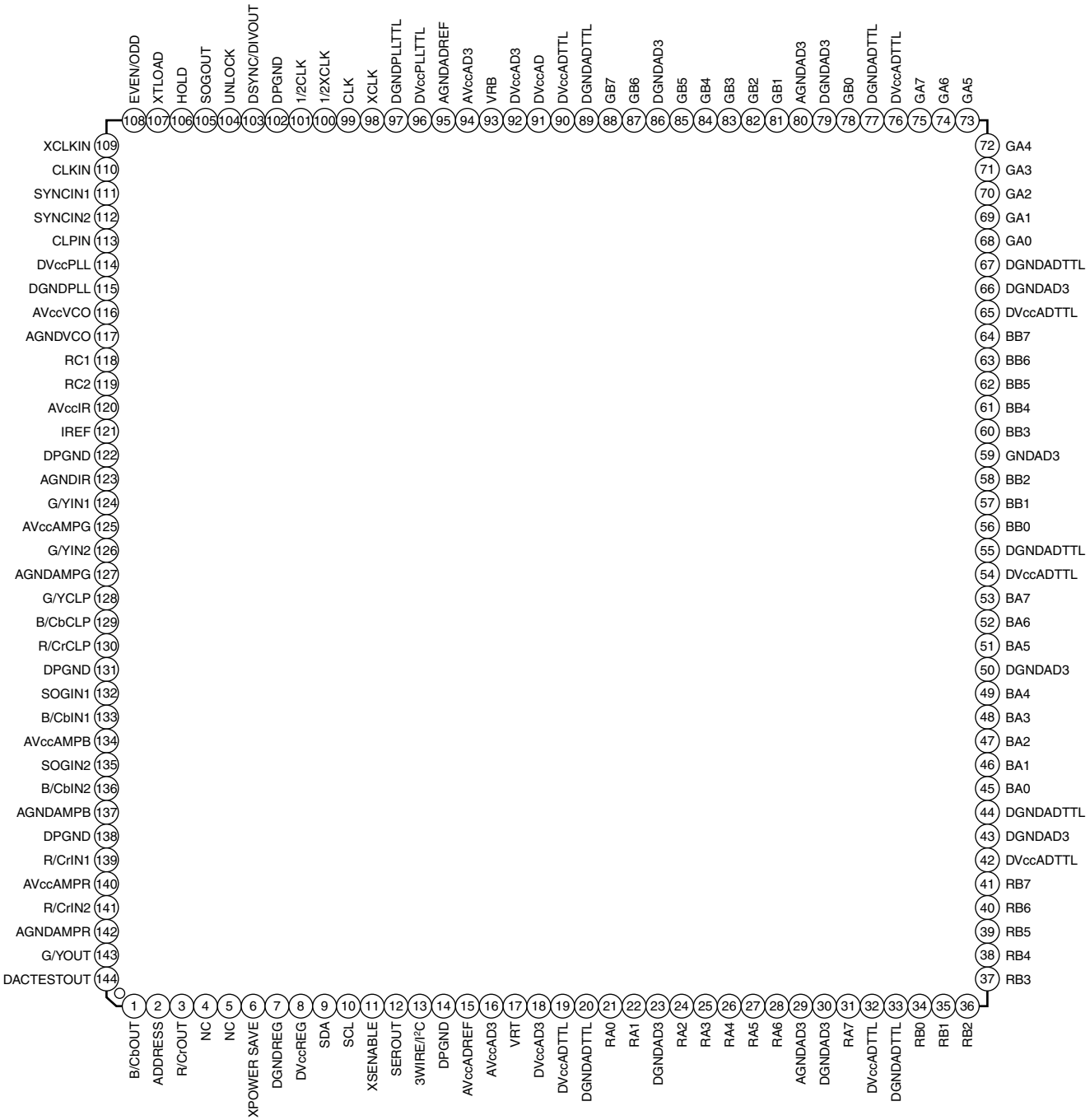
● Pin Function

No.	Pin Name	I/O	Pin Function
57-51, 40-34, 11-6, 78	A_{19} - A_0, A_{-1}	I	Address input
78-75, 72-65, 62-59, 32-19, 26-19, 16-13	DQ_{31} - DQ_0	I/O	Data input/output
80	CE	I	Chip enable
81	OE	I	Output enable
86	WE	I	Write enable
82	DW/W	I	16 bit, 32 bit mode switch
87	WP	I	Write protect
88	ACC	I	Acceleration
17, 27, 33, 64, 74, 79	Vss	–	Ground
12, 18, 28, 58, 63, 73	Vcc	–	Power supply
1-5, 41-50, 83-85, 89, 90	N.C.	–	No connection

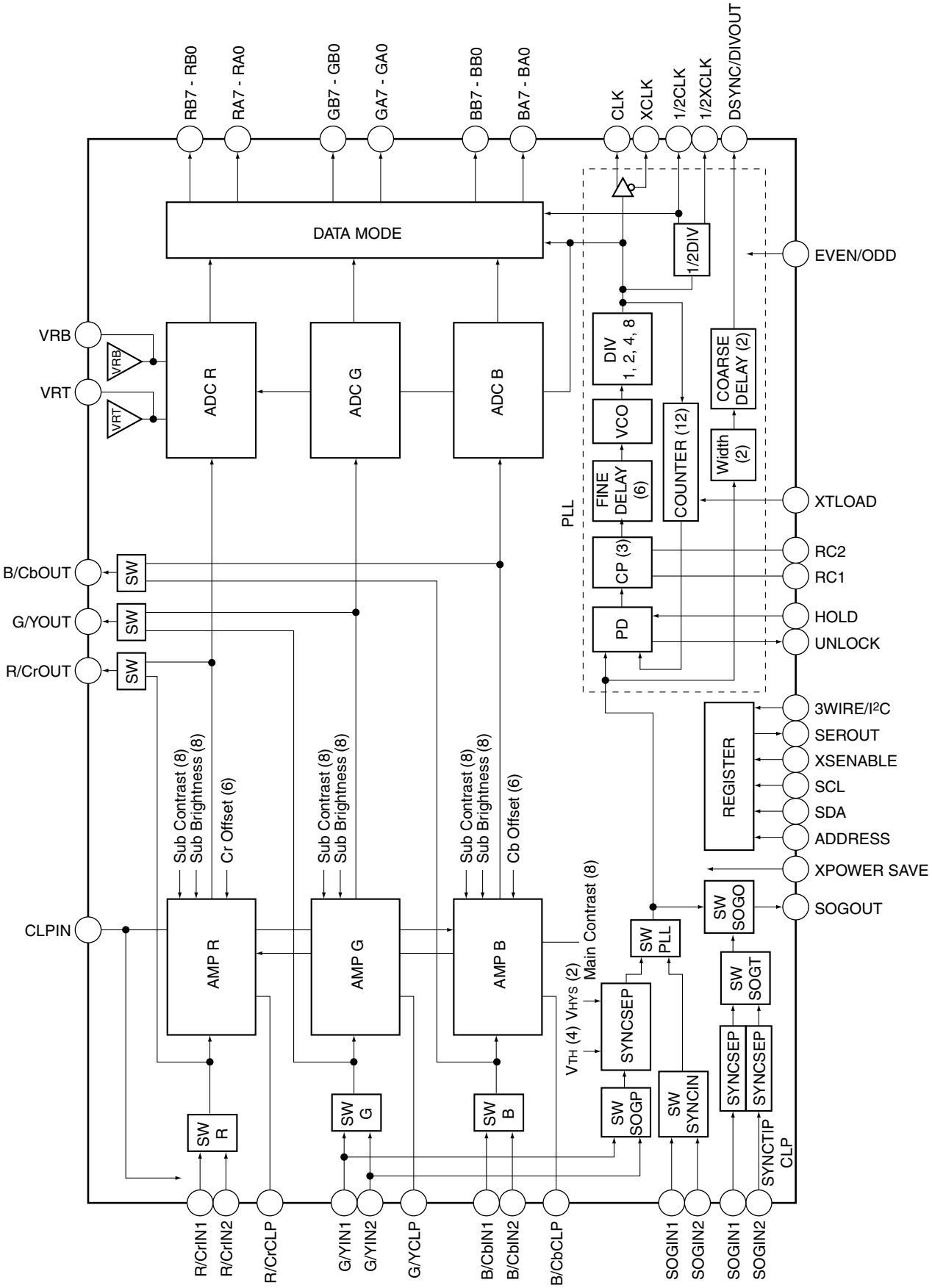
CXA3516R (RGB ASSY : IC6001)

• AD + PLL IC

● Pin Arrangement (Top View)



● Block Diagram



● Pin Function

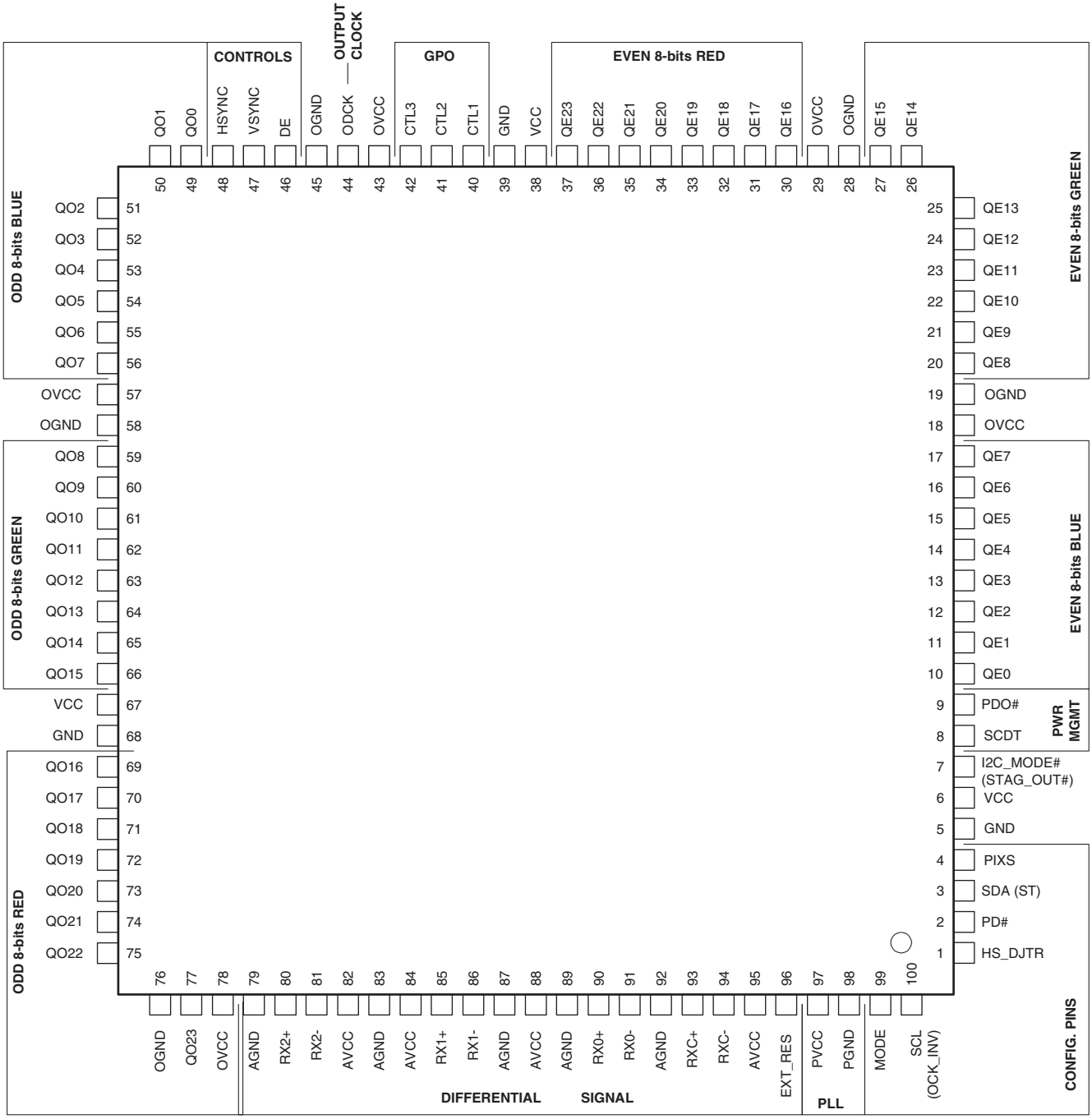
No.	Symbol	I/O	Pin Function
1	B/CbOUT	O	Amplifier output signal monitor
2	ADDRESS	I	I²C slave address setting
3	R/CrOUT	O	Amplifier output signal monitor
4	NC	–	Not used
5	NC	–	Not used
6	XPOWER SAVE	I	Power save setting
7	DGNDREG	–	Register GND
8	DVccREG	–	Register power supply
9	SDA	I	Control register data input
10	SCL	I	Control register CLK input
11	XSENABLE	I	Enable signal input for 3-wire control register
12	SEROUT	O	3-wire control register data readout
13	3WIRE/I²C	I	Selection of input between I²C bus and 3-wire bus
15	AVccADREF	–	Reference power supply for A/D converter
16, 94	AVccAD3	–	Analog power supply for A/D converter
17	VRT	O	Top reference voltage output for A/D converter
18, 92	DVccAD3	–	Digital power supply for A/D converter
19, 32, 42, 54, 65, 76, 90	DVccADTTL	–	TTL output power supply for A/D converter
20, 33, 44, 55, 67, 77, 89	DGNDADTTL	–	TTL output GND for A/D converter
21, 22, 24-28, 31	RA0 - RA7	O	Data output for R-channel port A side
23, 30, 43, 50, 59, 66, 79, 86	DGNDAD3	–	Digital GND for A/D converter
29, 80	AGNDAD3	–	Analog GND for A/D converter
34-41	RB0 - RB7	O	Data output for R-channel port B side
45-49, 51-53	BA0 - BA7	O	Data output for B-channel port A side
56-58, 60-64	BB0 - BB7	O	Data output for B-channel port B side
68-75	GA0 - GA7	O	Data output for G-channel port A side
78, 81-85, 87, 88	GB0 - GB7	O	Data output for G-channel port B side
91	DVccAD	–	Digital power supply for A/D converter
93	VRB	O	Bottom reference voltage output for A/D converter
95	AGNDADREF	–	Reference voltage GND for A/D converter
96	DVccPLLTTL	–	TTL output power supply for PLL
97	DGNDPLLTTL	–	TTL output GND for PLL
98	XCLK	O	Inverted CLK output
99	CLK	O	CLK output
100	1/2XCLK	O	Inverted 1/2CLK output
101	1/2CLK	O	1/2CLK output
103	DSYNC/DIVOUT	O	DSYNC or DIVOUT signal output
104	UNLOCK	O	Unlock signal output
105	SOGOUT	O	Output for SYNC ON GREEN
106	HOLD	I	Input for phase comparison disable signal

No.	Symbol	I/O	Pin Function
107	XTLOAD	I	Programmable counter reset setting
108	EVEN/ODD	I	Inverted pulse input of ADC sampling CLK
109	XCLKIN	I	Inverted CLK input for testing
110	CLKIN	I	CLK input for testing
111	SYNCIN1	I	Sync input 1
112	SYNCIN2	I	Sync input 2
113	CLPIN	I	Clamp pulse input
114	DVccPLL	–	Digital power supply for PLL
115	DGNDPLL	–	Digital GND for PLL
116	AVccVCO	–	Analog power supply for PLL VCO
117	AGNDVCO	–	Analog GND for PLL VCO
118	RC1	–	External pin for PLL loop filter
119	RC2	–	External pin for PLL loop filter
120	AVccIR	–	Analog power supply for IREF
121	IREF	I	Current setup
123	AGNDIR	–	Analog GND for TREF
124	G/YIN1	I	G/Y signal input 1
125	AVccAMPG	–	Power supply for G/Y amplifier block
126	G/YIN2	I	G/Y signal input 2
127	AGNDAMPG	–	GND for G/Y amplifier block
128	G/YCLP	–	Clamp capcitor for brightness
129	B/CbCLP	–	Clamp capcitor for brightness
130	R/CrCLP	–	Clamp capcitor for brightness
132	SOGIN1	I	SYNC ON GREEN signal input 1
133	B/CbIN1	I	B/Cb signal input 1
134	AVccAMPB	–	Power supply for B/Cb amplifier block
135	SOGIN2	I	SYNC ON GREEN signal input 2
136	B/CbIN2	I	B/Cb signal input 2
137	AGNDAMPB	–	GND for B/Cb amplifier block
139	R/CrIN1	I	R/Cr signal input 1
140	AVccAMPR	–	Power supply for R/Cr amplifier block
141	R/CrIN2	I	R/Cr signal input 2
142	AGNDAMPR	–	GND for R/Cr amplifier block
143	G/YOUT	O	Monitor pin for amplifier output signal
144	DAC TEST OUT	O	DAC testing output for amplifier block control register
14, 102, 122, 131, 138	DPGND	–	GND

SII116BCTG100 (AV I/O ASSY : IC7503)

• Panel Link Receiver IC

● Pin Arrangement (Top View)



● Pin Function

Output Pins

Pin Name	No.	Type	Function
QE23 - QE0	37-30, 27-20, 17-10	Out	Output Even Data[23:0] corresponds to 24-bit pixel data for one pixel per clock input mode and to the first 24-bit pixel data for two pixels per clock mode. Output data is synchronized with output data clock (ODCK). Refer to the TFT Panel Data Mapping section, which tabulates the relationship between the input data to the transmitter and output data from the receiver. A low level on PD# or PDO# will put the output drivers into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.
QO23 - QO0	77, 75-69, 66-59, 56-49	Out	Output Odd Data[23:0] corresponds to the second 24-bit pixel data for two pixels per clock mode. During one pixel per clock mode, these outputs are driven low. Output data is synchronized with output data clock (ODCK). Refer to the TFT Panel Data Mapping section, which tabulates the relationship between the input data to the transmitter and output data from the receiver. A low level on PD# or PDO# will put the output drivers into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.
ODCK	44	Out	Output Data Clock. This output can be inverted using the OCK_INV pin. A low level on PD# or PDO# will put the output driver into a high impedance (tri-state) mode. A weak internal pulldown device brings the output to ground.
DE	46	Out	Output Data Enable. This signal qualifies the active data area. A HIGH level signifies active display time and a LOW level signifies blanking time. This output signal is synchronized with the output data. A low level on PD# or PDO# will put the output driver into a high impedance (tri-state) mode. A weak internal pull-down device brings the output to ground.
HSYNC VSYNC CTL1 CTL2 CTL3	48 47 40 41 42	Out	Horizontal Sync output control signal. Vertical Sync output control signal. General output control signal 1. This output is not powered down by PDO#. General output control signal 2. General output control signal 3. A low level on PD# or PDO# will put the output drivers (except CTL1 by PDO#) into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.

Differential Signal Data Pins

Pin Name	No.	Type	Function
RX0+ RX0- RX1+ RX1- RX2+ RX2-	90 91 85 86 80 81	Analog	Receiver Differential Data Pins. TMDS Low Voltage Differential Signal input data pairs.
RXC+ RXC-	93 94	Analog	Receiver Differential Clock Pins. TMDS Low Voltage Differential Signal input clock pair.
EXT_RES	96	Analog	Impedance Matching Control. An external 390Ω resistor must be connected between AVCC and this pin.

Configuration Pins

Pin Name	No.	Type	Function
MODE	99	In	Mode Select Pin. Used to select between drop-in strap-selected operation, or register programmable operation. To activate register-programmable operation, tie both pin 99 and pin 7 LOW. HIGH=161B (Compatible) Mode – strap selections are used to set part operation. Internal registers controlling non strap-selectable functions are reset to their default values. LOW=1161 (Programmable) Mode – I2C registers are used to program part operation.
OCK_INV	100	In	ODCK Polarity. A LOW level selects normal ODCK output. A HIGH level selects inverted ODCK output. All other output signals are unaffected by this pin. They will maintain the same timing no matter the setting of OCK_INV pin
SCL			I2C Port Clock. When pins 99 and 7 are tied LOW, pin 100 functions as an I2C port input clock. The slave I2C function does not ever try to extend cycles by pulling this pin low, so the pin remains input-only at all times. This pin accepts 3.3V signaling only; it is not 5V-tolerant.
PIXS	4	In	Pixel Select. A LOW level indicates one pixel (up to 24-bits) per clock mode using QE[23:0]. A HIGH level indicates two pixels (up to 48-bits) per clock mode using QE[23:0] for first pixel and QO[23:0] for second pixel.
STAG_OUT#	7	In	Staggered Output. A HIGH level selects normal simultaneous outputs on all odd and even data lines. A LOW level selects staggered output drive. This function is only available in two pixels per clock mode.
I2C_MODE#			This pin must be tied LOW to put the receiver into I2C mode.
ST	3	In/Out	Output Drive. A HIGH level selects HIGH output drive strength. A LOW level selects LOW output drive strength.
SDA			I2C Port Data. When pins 99 and 7 are tied LOW, pin 3 functions as an I2C port data I/O signal. This pin accepts 3.3V signaling only; it is not 5V-tolerant.
HS_DJTR	1	In	HSYNC De-jitter. This pin enables/disables the HSYNC de-jitter function. To enable the HSYNC de-jitter function this pin should be HIGH. To disable the HSYNC de-jitter function this pin should be LOW.

Power Management Pins

Pin Name	No.	Type	Function
SCDT	8	Out	Sync Detect. A HIGH level is outputted when DE is actively toggling indicating that the link is alive. A LOW level is outputted when DE is inactive, indicating the link is down. Can be connected to PDO# to power down the outputs when DE is not detected. The SCDT output itself, however, remains in the active mode at all times.
PDO#	9	In	Output Driver Power Down (active LOW). A HIGH level indicates normal operation. A LOW level puts all the output drivers only (except SCDT and CTL1) into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground. PDO# is a sub-set of the PD# description. The chip is not in power-down mode with this pin. SCDT and CTL1 are not tri-stated by this pin.
PD#	2	In	Power Down (active LOW). A HIGH level indicates normal operation. A LOW level indicates power down mode. During power down mode, all the output drivers are put into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground. Additionally, all analog logic is powered down, and all inputs are disabled. Driving PD# LOW disables all internal logic and outputs, including SCDT and clock detect functions; it also resets all internal programmable registers to their default states.

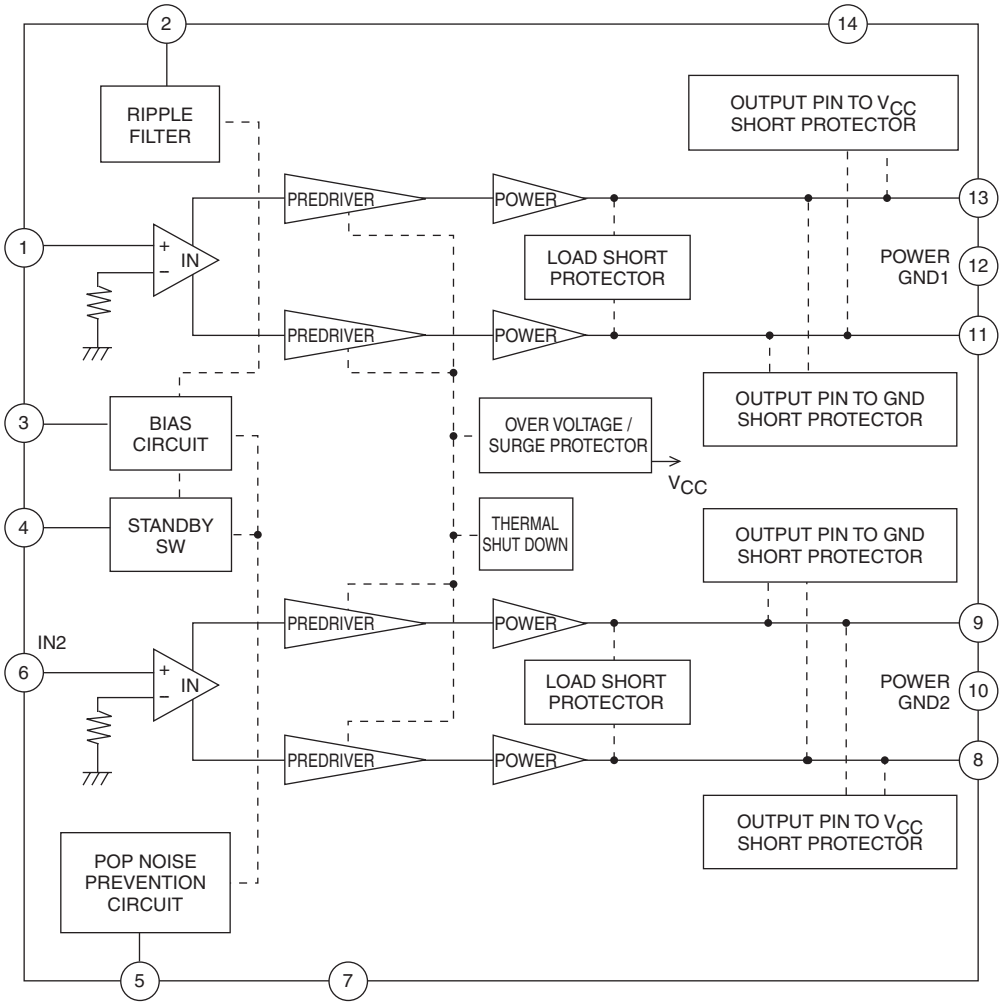
Power and Ground Pins

Pin Name	No.	Type	Function
VCC	6, 38, 67	Power	Digital Core VCC, must be set to 3.3V.
GND	5, 39, 68	Ground	Digital Core GND.
OVCC	18, 29, 43, 57, 78	Power	Output VCC, must be set to 3.3V.
OGND	19, 28, 45, 58, 76	Ground	Output GND.
AVCC	82, 84, 88, 95	Power	Analog VCC must be set to 3.3V.
AGND	79, 83, 87, 89, 92	Ground	Analog GND.
PVCC	97	Power	PLL Analog VCC must be set to 3.3V.
PGND	98	Ground	PLL Analog GND.

LA4625 (AUDIO AMP ASSY : IC5003)

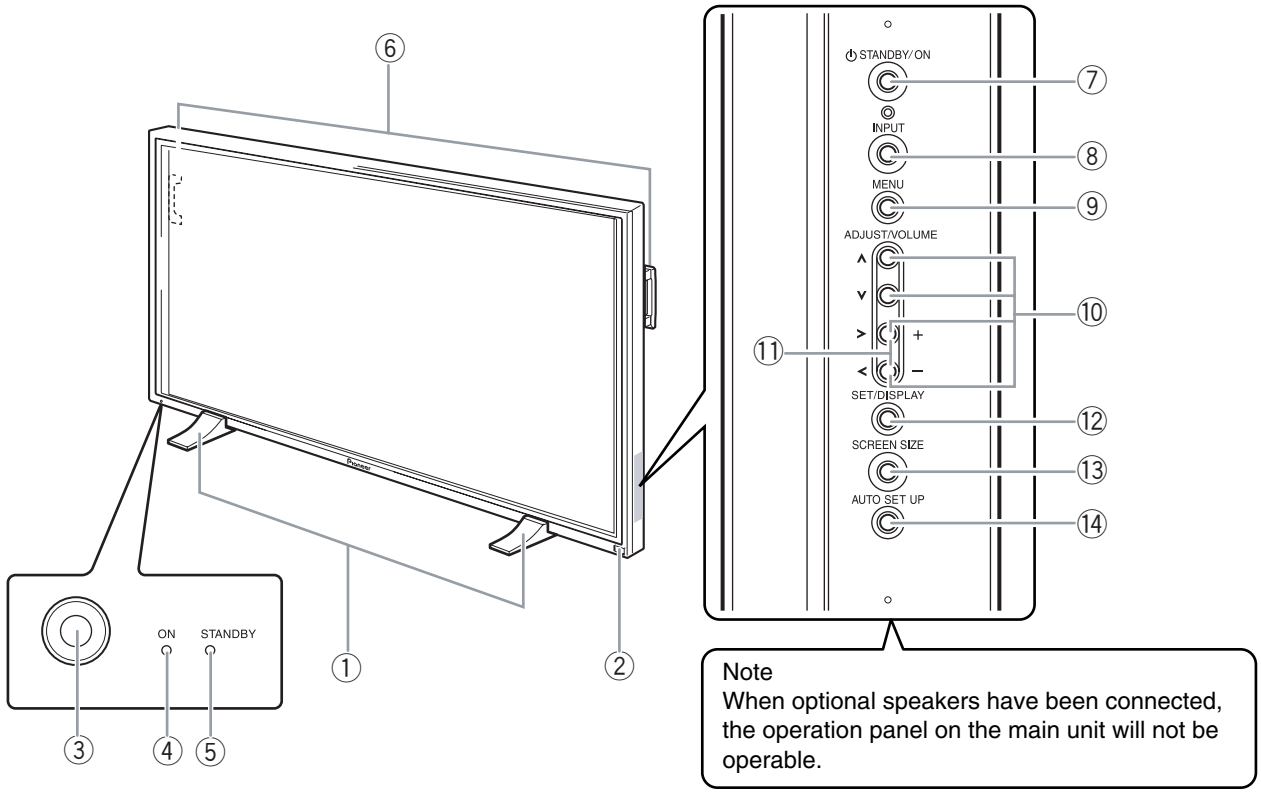
• 2ch BLT AF Power Amp. IC

● Block Diagram



8. PANEL FACILITIES

■ MAIN UNIT



Note
When optional speakers have been connected, the operation panel on the main unit will not be operable.

Main unit

① **Display stand**

② **Remote control sensor**
Point the remote control toward the remote sensor to operate the unit .

③ **Ambient light sensor**
This sensor measures the level of light inside the viewing room; it is enabled when the [ENERGY SAVE] option is set to [AUTO] .

④ **ON indicator**
Lights green when the plasma display is operating.
When flashing, the indicator is used to indicate error messages.
The indicator flashes green once every two seconds when the [POWER MANAGEMENT] function is operating.

⑤ **STANDBY indicator**
Lights red when the unit is in standby mode.
When flashing, the indicator is used to indicate error messages.

⑥ **Handles**
The plasma displays PDP-504CMX/ PDP-50MXE1/ PDP-50MXE1-S and PDP-434CMX/ PDP-43MXE1/ PDP-43MXE1-S utilize differing methods of handle attachment, but the handles themselves are used in the same way.
Operation panel on the main unit

⑦ **STANDBY/ON button**
Press to put the display in operation or standby mode.

Operation panel on the main unit

⑧ **INPUT button**
Press to select the input.

⑨ **MENU button**
Press to open and close the on-screen menu.

⑩ **ADJUST (▲ / ▼ / ► / ◄) buttons**
Use these buttons to move the onscreen cursor between selection options, and to perform adjustments.
Instructions for use are given with each command option onscreen.

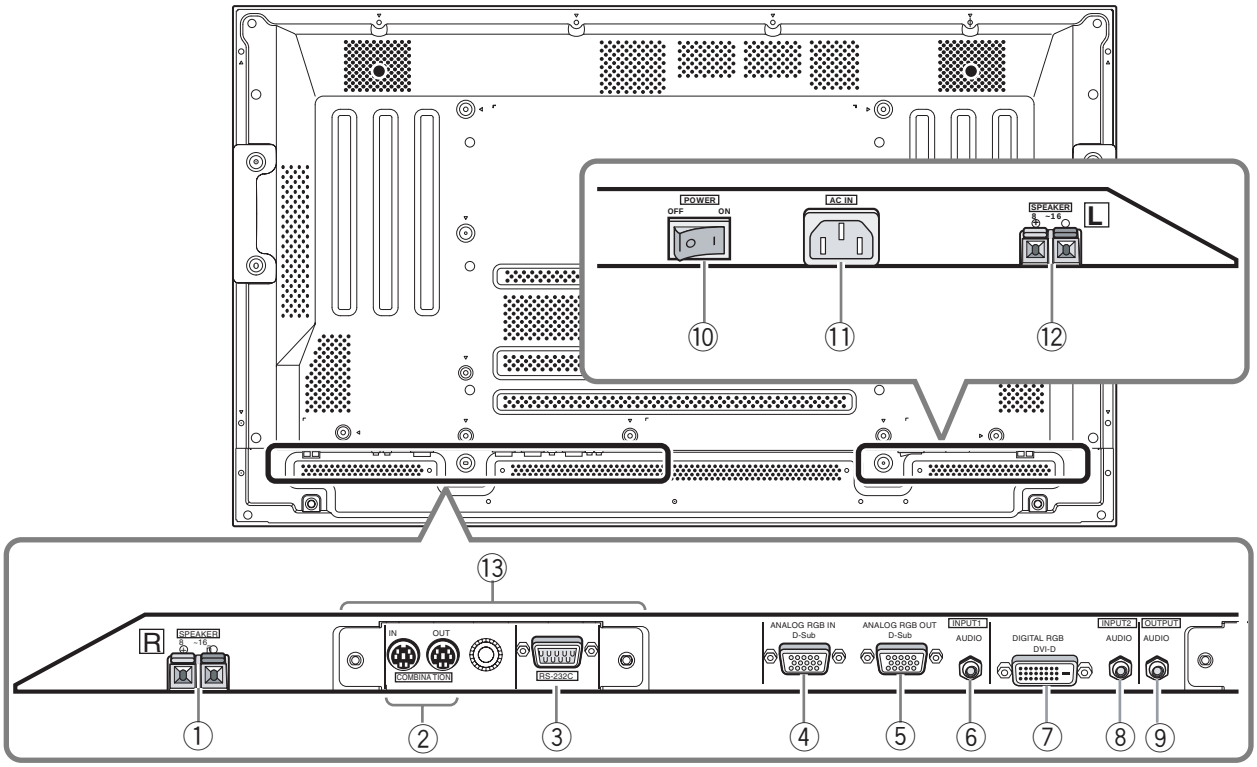
⑪ **VOLUME (+/–) buttons**
When not indicated for use in onscreen menu items,these buttons are used for adjusting the sound volume.

⑫ **SET/DISPLAY button**
Use to confirm onscreen menu selections, and to change settings.
When not indicated by onscreen menus, used to display the current set status.

⑬ **SCREEN SIZE button**
Press to select the screen size.

⑭ **AUTO SET UP button**
When using computer signal input, automatically sets the [POSITION], [CLOCK] and [PHASE] to optimum values.

■ CONNECTION PANEL (PLASMA DISPLAY SECTION)



Plasma Display Section

The plasma display is provided with 2 video input connectors, 1 video output connector, audio input/output jacks and speaker terminals.
When this option video card is installed on a plasma display, an additional three sets of video input connectors are provided (total five), together with one additional video output connector (total two). (Refer to the following page.)

① **SPEAKER (R) terminal**
For connection of an external right speaker.
Connect a speaker that has an impedance of 8 -16 Ω.

② **COMBINATION IN/OUT**
Never connect any component to these connectors without first consulting your Pioneer installation technician.
These connectors are used in the factory setup.

③ **RS-232C**
Never connect any component to this connector without first consulting your Pioneer installation technician.
This connector is used in the factory setup.

④ **ANALOG RGB IN (INPUT1) (mini D-sub 15 pin)**
For connection of a personal computer (PC) or similar component. Make sure that the connection made corresponds to the format of the signal output from the connected component.

Note: Component signals are supported only when a video card is installed.

⑤ **ANALOG RGB OUT (INPUT1) (mini D-sub 15 pin)**
Use the ANALOG RGB OUT (INPUT1) terminal to output the video signal to an external monitor or other component.
Note: The video signal will not be output from the ANALOG RGB OUT (INPUT1) terminal when the main power of this unit is off or in standby mode.

⑥ **AUDIO (INPUT1) (Stereo mini jack)**
Use to obtain sound when INPUT1 is selected.
Connect the audio output jack of components connected to INPUT1 to this unit.

⑦ **DIGITAL RGB (INPUT2) (DVI-D jack)**
Use to connect a computer.
Note: This unit does not support the display of copyguard-protected video signals.

⑧ **AUDIO (INPUT2) (Stereo mini jack)**
Use to obtain sound when INPUT2 is selected.
Connect the audio output jack of components connected to INPUT2 to this unit.

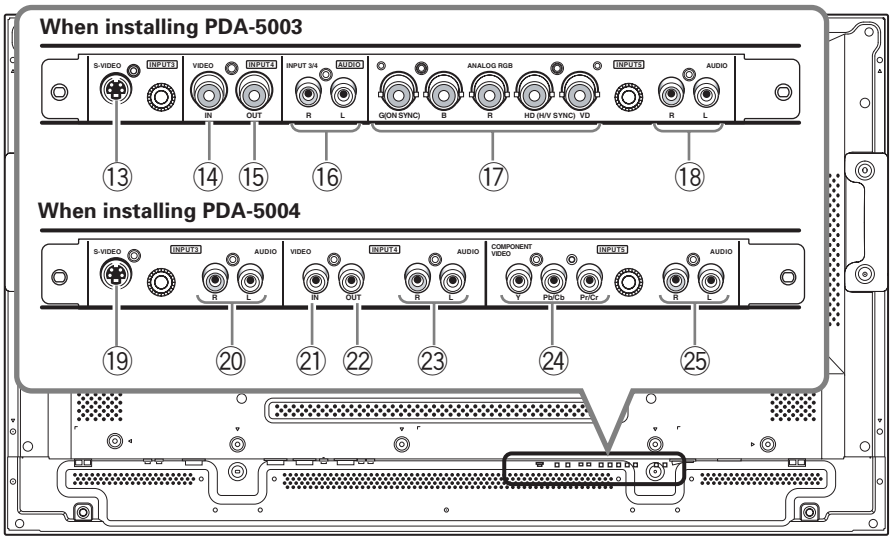
⑨ **AUDIO (OUTPUT) (Stereo mini jack)**
Use to output the audio of the selected source component connected to this unit to an AV amplifier or similar component.

⑩ **MAIN POWER switch**
Use to switch the main power of the unit on and off.

⑪ **AC IN**
Use to connect a power cord to an AC outlet.

⑫ **SPEAKER (L) terminal**
For connection of an external left speaker. Connect a speaker that has an impedance of 8 -16 Ω.

■ CONNECTION PANEL (VIDEO CARD SECTION: PDA5003, PDA-5004)



Video Card <PDA-5003> Section

The video card is provided with 3 video input connectors, 1 video output connector, and 2 audio input connectors. Consult the pages noted in parentheses ( ) for details regarding connections to the various jacks and connectors.

⑬ **S-VIDEO (INPUT3) (S-video jack)**
For connection of components that have an S-video output jack such as a video deck, video camera, laser disc player, or DVD recorder).

⑭ **VIDEO IN (INPUT4) (BNC jack)**
For connection of components that have a composite video output jack such as a video deck, video camera, laser disc player, or DVD recorder.

⑮ **VIDEO OUT (INPUT4) (BNC jack)**
Use the VIDEO OUT (INPUT4) jack to output the video signal to an external monitor or other component.
Note: The video signal will not be output from the VIDEO OUT (INPUT4) jack when the main power of this display is off or in standby mode.

⑯ **AUDIO R/L (INPUT3/4) (RCA Pin jacks)**
Use to obtain sound when INPUT3 or INPUT4 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT3 or INPUT4.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

⑰ **ANALOG RGB (INPUT5) (BNC jacks)**
For connecting components equipped with RGB outputs jacks, such as a personal computer or external RGB decoder; or components equipped with component output jacks, such as a DVD recorder.
Make sure that the connection made corresponds to the format of the signal output from the connected component.

⑱ **AUDIO R/L (INPUT5) (RCA Pin jacks)**
Use to obtain sound when INPUT5 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT5.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

Video Card <PDA-5004> Section

The video card is provided with 3 video input connectors, 1 video output connector, and 3 audio input connectors. Consult the pages noted in parentheses ( ) for details regarding connections to the various jacks and connectors.

⑲ **S-VIDEO (INPUT3) (S-video jack)**
For connection of components that have an S-video output jack such as a video deck, video camera, laser disc player, or DVD recorder.

⑳ **AUDIO R/L (INPUT3) (RCA Pin jacks)**
Use to obtain sound when INPUT3 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT3.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

㉑ **VIDEO IN (INPUT4) (RCA Pin jack)**
For connection of components that have a composite video output jack such as a video deck, video camera, laser disc player, or DVD recorder.

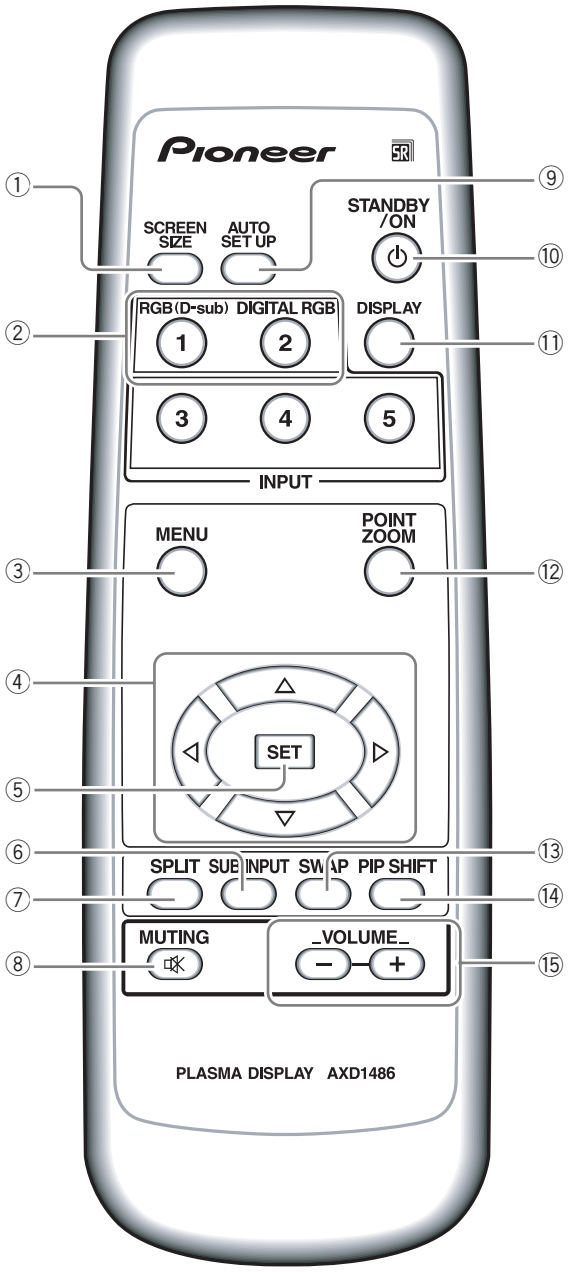
㉒ **VIDEO OUT (INPUT4) (RCA Pin jack)**
Use the VIDEO OUT (INPUT4) jack to output the video signal to an external monitor or other component.
Note: The video signal will not be output from the VIDEO OUT (INPUT4) jack when the main power of this display is off or in standby mode.

㉓ **AUDIO R/L (INPUT4) (RCA Pin jacks)**
Use to obtain sound when INPUT4 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT4.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

㉔ **COMPONENT VIDEO (INPUT5) (RCA Pin jacks)**
For connection of components that have component video output jacks such as a DVD recorder.

㉕ **AUDIO R/L (INPUT5) (RCA Pin jacks)**
Use to obtain sound when INPUT5 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT5.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

■ REMOTE CONTROL UNIT



① **SCREEN SIZE button**
Press to select the screen size.

② **INPUT buttons**
Press to select the input .

Note: INPUT keys 3, 4, and 5 are operable only when an optional PDA-5003 or PDA-5004 is attached to the unit.

③ **MENU button**
Press to open and close the on-screen menu.

④ **ADJUST (▲ / ▼ / ► / ◄) buttons**
Use to navigate menu screens and to adjust various settings on the unit.
Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.

⑤ **SET button**
Press to adjust or enter various settings on the unit.

⑥ **SUB INPUT button**
During multi-screen display, use this button to change inputs to subscreens.

⑦ **SPLIT button**
Press to switch to multi-screen display.

⑧ **MUTING button**
Press to mute the volume.

⑨ **AUTO SET UP button**
When using computer signal input, automatically sets the [POSITION], [CLOCK] and [PHASE] to optimum values.

⑩ **STANDBY/ON button**
Press to put the unit in operation or standby mode.

⑪ **DISPLAY button**
Press to view the unit's current input and setup mode.

⑫ **POINT ZOOM button**
Use to select and enlarge one part of the screen.
SWAP button During multi-screen display, use this button to switch between main screen and subscreen.

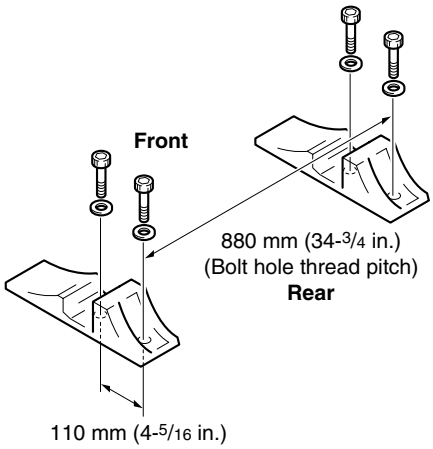
⑭ **PIP SHIFT button**
When using PinP mode with multi-screen display, use this button to move the position of subscreen.

■ INSTALLATION OF THE UNIT

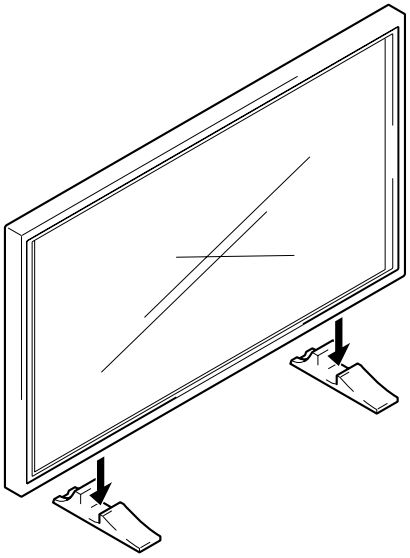
Installation using the supplied display stand

Be sure to fix the supplied stand to the installation surface. Use commercially available M8 bolts that are 25 mm longer than the thickness of the installation surface.

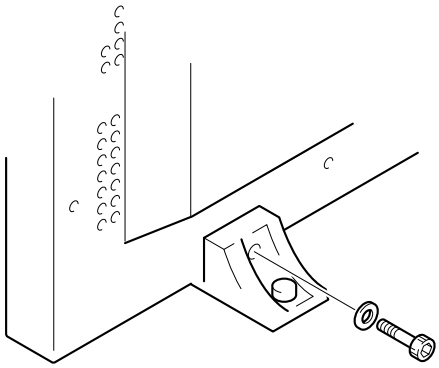
1. Fix the supplied stand to the installation surface at each of the 4 prepared holes using commercially available M8 bolts .



2. Set this unit in the stand.



3. Fix this unit using the supplied washer and bolt.



Use a 6 mm ($^1/_4$ in.) hex wrench to bolt them.

⚠ CAUTION

This display unit weighs at least 32.5kg (71 lbs 10oz) and has little front-to-back depth, making it very unstable when stood on edge. As a result, two or more persons should cooperate when unpacking, moving, or installing the display.

Installation using the optional PIONEER stand or installation bracket

- Please be sure to request installation or mounting of this unit or the installation bracket by an installation specialist or the dealer where purchased.
- When installing, be sure to use the bolts provided with the stand or installation bracket.
- For details concerning installation, please refer to the instruction manual provided with the stand or installation bracket.

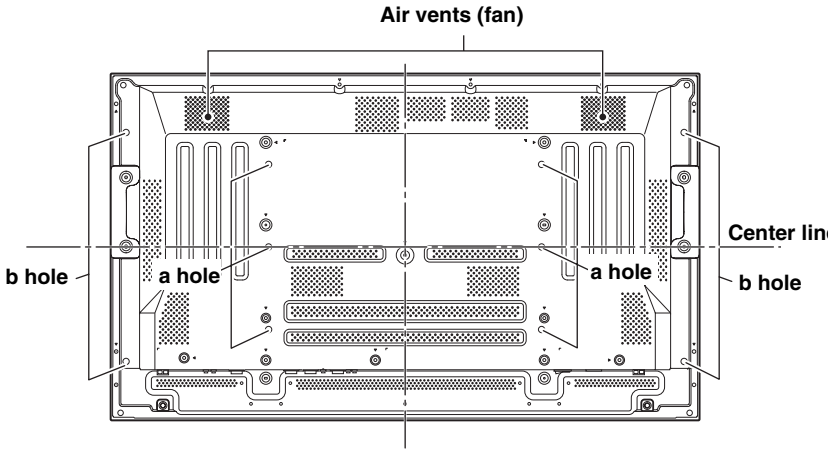
Installation using accessories other than the PIONEER stand or installation bracket (sold separately)

- When possible, please install using parts and accessories manufactured by PIONEER. PIONEER will not he held responsible for accident or damage caused by the use of parts and accessories manufactured by other companies.
- For custom installation, please consult the dealer where the unit was purchased, or a qualified installer.

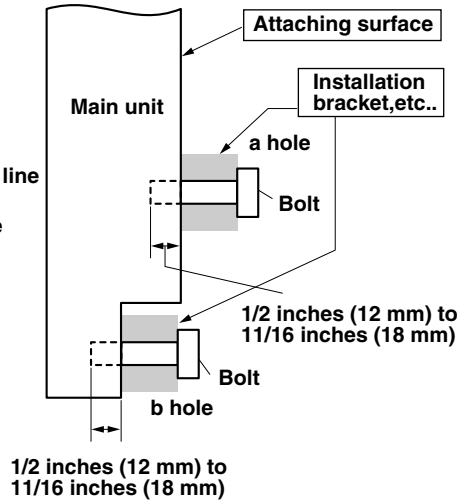
Wall-mount installation of the unit

This unit has been designed with bolt holes for wall-mount installation, etc.. The installation holes that can be used are shown in the diagram below.

- Be sure to attach in 4 or more locations above and below, left and right of the center line.
- Use bolts that are long enough to be inserted 1/2 inch (12 mm) to 11/16 inch (18 mm) into the main unit from the attaching surface for both a holes and b holes. Refer to the side view diagram below.
- As this unit is constructed with glass, be sure to install it on a flat, unwarped surface.



Rear view diagram



Side view diagram

CAUTION

To avoid malfunction, overheating of this unit, and possible fire hazard, make sure that the vents on the main unit are not blocked when installing. Also, as hot air is expelled from the air vents, be careful of deterioration and dirt build up on rear surface wall, etc..

CAUTION

Please be sure to use an M8 (Pitch = 1.25 mm) bolt. (Only this size bolt can be used.)

CAUTION

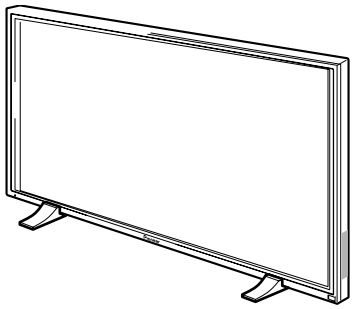
This display unit weighs at least 32.5 kg (71 lbs 10oz) and has little front to back depth, making it very unstable when stood on edge. As a result, two or more persons should cooperate when unpacking,moving, or installing the display.

CAUTION

This unit incorporates a thin design. To ensure safety if vibrated or shaken, please be sure to take measures to prevent the unit from tipping over.

Pioneer sound.vision.soul

Service Manual



PDP-504CMX

ORDER NO.
ARP3191

PLASMA DISPLAY

PDP-504CMX
PDP-50MXE1
PDP-50MXE1-S

VIDEO CARD

PDA-5003
PDA-5004

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-504CMX	LUC	AC100 - 120V	
PDP-50MXE1	LDFK	AC100 - 240V	
PDP-50MXE1-S	LDFK	AC100 - 240V	
PDA-5003	UCYV	-	
PDA-5004	UCYV	-	

For details, refer to "Important symbols for good services".

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ⓒ**PIONEER CORPORATION 2004**

T-ZZE MAR. 2004 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

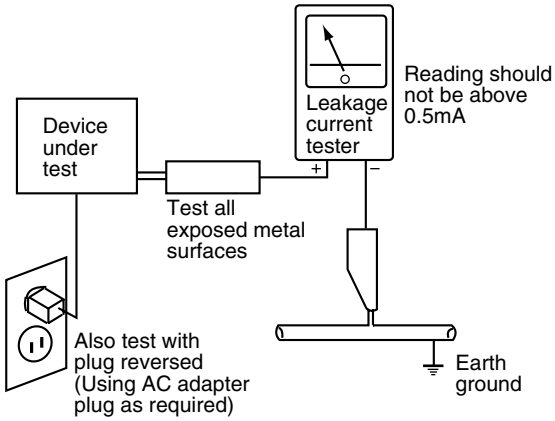
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer (In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. POWER SUPPLY Unit..... (223V)
2. 50 X DRIVE Assy .....(–230V to 223V)
3. 50 Y DRIVE Assy .....(353V)
4. 50 SCAN A Assy ..... (353V)
5. 50 SCAN B Assy ..... (353V)
6. X CONNECTOR AAssy ..... (–230V to 223V)
7. X CONNECTOR B Assy ..... (–230V to 223V)

: Part is Charged Section.

: Part is the High Voltage Generating Points other than the Charged Section.

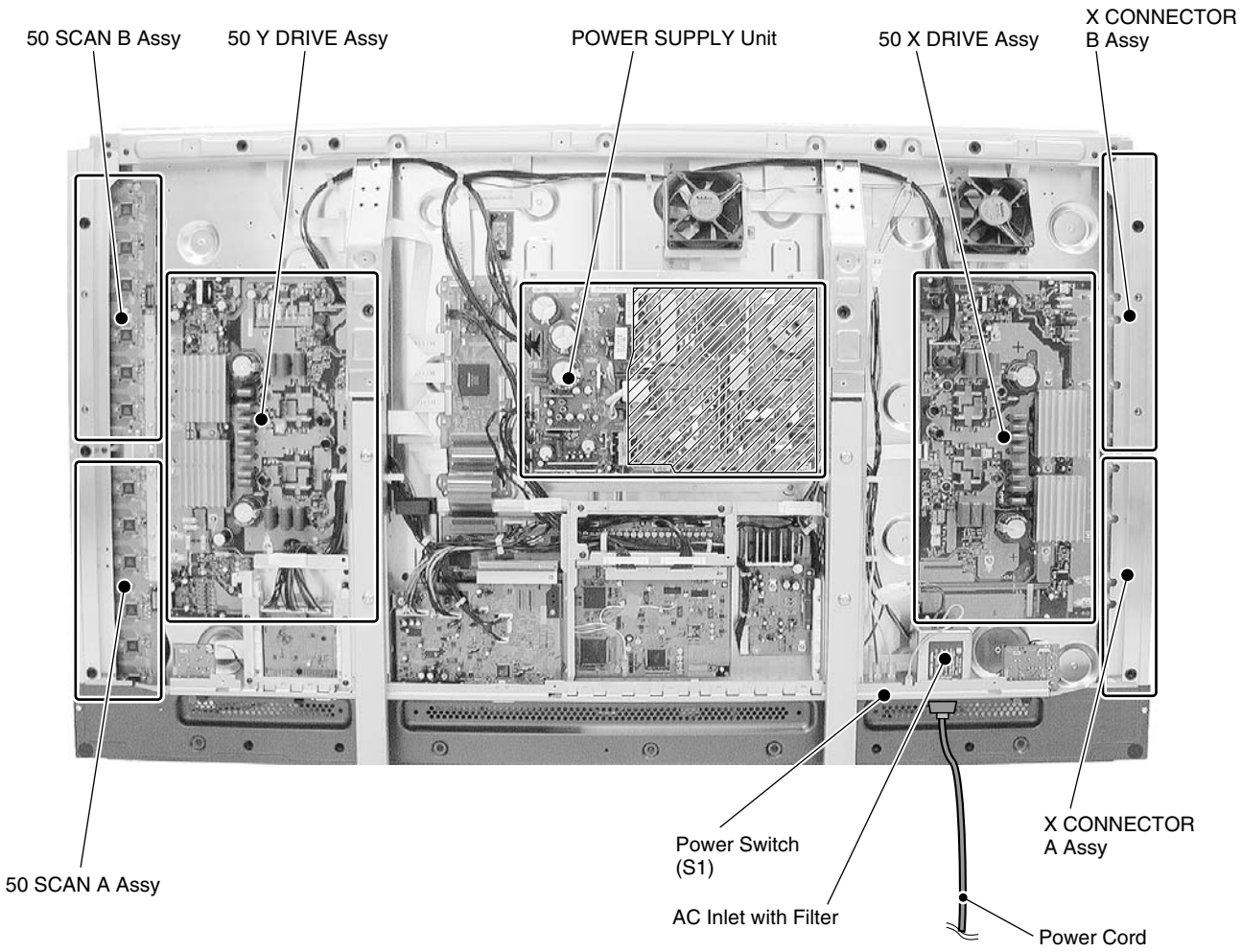


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

■ PLASMA DISPLAY
(PDP-504CMX, PDP-50MXE1, PDP-50MXE1-S)

General

Light emission panel ..... 50 inch plasma AC display panel
109.8 (W) x 62.1 (H) x 126.1 (diagonal) cm
Number of pixels ..... 1280 x 768
Power supply .... AC 100 - 120 V, 50/60 Hz (PDP-504CMX)
Power supply .... AC 100 - 240 V, 50/60 Hz (PDP-50MXE1)
(PDP-50MXE1-S)
Rated current ..... 3.6 A - 2.9A (PDP-504CMX)
Rated current ..... 3.6 A - 1.5A (PDP-50MXE1)
(PDP-50MXE1-S)
Standby power consumption .....0.8 W (PDP-504CMX)
Standby power consumption .....1 W (PDP-50MXE1)
External dimension .....1218 (W) x 714 (H) x 98 (D) mm
47-31/32 (W) x 28-1/8 (H) x 3-7/8 (D) in.
(including display stand)
.....1218 (W) x 737 (H) x 300 (D) mm
47-31/32 (W) x 29-1/32 (H) x 11-13/16 (D) in.
Weight 41.0kg
(including display stand) ..... 41.6 kg
Operating temperature range..... 0 to 40 °C
Operating Humidity ..... 20 to 80 %
Operating atmospheric pressure range .... 760 to 1100 hPa

Input/output
Video

INPUT 1

Input — Mini D-sub 15 pin (socket connector)
RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/VS, VD ... TTL level
/positive and negative polarity
/2.2 kΩ
G ON SYNC
... 1 Vp-p/75 Ω/negative sync.
*Compatible with Microsoft's Plug & Play
(VESA DDC1/2B)

Output — Mini D-sub 15 pin (socket connector)
75 Ω/with buffer

INPUT 2

Input — DVI-D 24-pin connector
Digital RGB signal (DVI compliant
TMDS signal)
*Compatible with Microsoft "Plug & Play"
(VESA DDC 2B)

Audio

Input — AUDIO INPUT (for INPUT 1)
Stereo mini jack
L/R ... 500mVrms/more than 10 kΩ

AUDIO INPUT (for INPUT 2)
Stereo mini jack
L/R ... 500mVrms/more than 10 kΩ

Output — AUDIO OUTPUT
Stereo mini jack
L/R ... 500mVrms (max)/less than 5 kΩ

SPEAKER
L/R ... 8 – 16 Ω/7W +7W (at 8 Ω)

Control

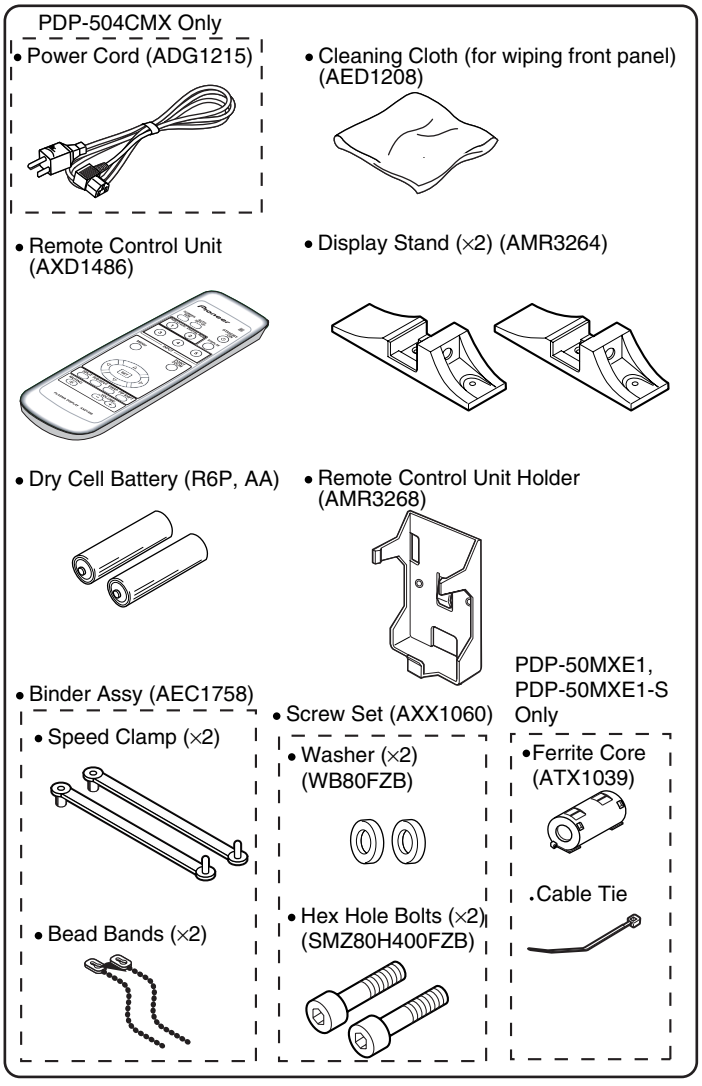
RS-232C .....D-sub 9 pin (pin connector)
COMBINATION IN/OUT..... Mini DIN 6 pin (x2)

Accessories

Power cord ..... 1 (PDP-504CMX Only)
Remote control unit 1
Remote control unit holder 1
AA (R6) batteries 2
Cleaning cloth (for screen) 1
Speed clamps 2
Bead bands 2
Warranty ..... 1 (PDP-504CMX Only)
Operating Instructions 1
Display stands 2
Washers 2
Hex hole bolts (M8X40) 2
Ferrite core .....1 (PDP-50MXE1, PDP-50MXE1-S Only)
Cable tie .....1 (PDP-50MXE1, PDP-50MXE1-S Only)

Due to improvements, specifications and design are subject to change without notice.

● Accessories



■ VIDEO CARD (PDA-5003, PDA-5004)

PDA-5003

General

External dimensions .... 301.5 (W) x 27.6 (H) x 144 (D) mm
11–7/8 (W) x 1-1/8 (H) x 5–11/16 (D) in.
Weight ..... 0.4 kg (14 oz)
Operating temperature range ..... 0 to 40 °C (32 to 104 °F)

Input/output

Video

INPUT 3

Input — S terminal (Mini DIN 4 pin)
- Y/C separate video signal

Y ..... 1 Vp-p/75 Ω/negative sync.
C ..... 0.286 Vp-p/75 Ω (NTSC)
0.3 Vp-p/75 Ω (PAL)

INPUT 4

Input — BNC jack
- Composite video signal

1 Vp-p/75 Ω/negative sync.

Output — BNC jack
75 Ω /with buffer

INPUT 5

Input — BNC jack (x5)
RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/VS, VD ... TTL level
/positive and negative polarity/
75 Ω or 2.2 kΩ
(impedance switch)
G ON SYNC ...
1 Vp-p/75 Ω/negative sync.

Audio

Input — AUDIO INPUT (for INPUT 3/4)
Pin jack (x2)
L/R ... 500mVrms/more than 10 kΩ

AUDIO INPUT (for INPUT 5)
Pin jack (x2)
L/R ... 500mVrms/more than 10 kΩ

PDA-5004

General

External dimensions .... 301.5 (W) x 27.6 (H) x 144 (D) mm
11–7/8 (W) x 1-1/8 (H) x 5–11/16 (D) in.
Weight ..... 0.4 kg (14 oz)
Operating temperature range ..... 0 to 40 °C (32 to 104 °F)

Input/output

Video

INPUT 3

Input — S terminal (Mini DIN 4 pin)
- Y/C separate video signal

Y ..... 1 Vp-p/75 Ω/negative sync.
C ..... 0.286 Vp-p/75 Ω (NTSC)
0.3 Vp-p/75 Ω (PAL)

INPUT 4

Input — BNC jack
- Composite video signal

1 Vp-p/75 Ω/negative sync.

Output — BNC jack
75 Ω /with buffer

INPUT 5

Input — RCA connector
- Component video signal

Y.....1 Vp-p / 75 Ω negative sync.
P_B/C_B, P_R/C_R
0.7 Vp-p (color 100%) / 75 Ω
- RGB signal (G ON SYNC)

G ON SYNC .. 1Vp-p/75 Ω/negative sync.
R/B .....0.7 Vp-p/75 Ω/no sync.

Audio

Input — AUDIO INPUT (for INPUT 3)
Pin jack (x2)
L/R ..... 500mVrms/more than 10 kΩ

AUDIO INPUT (for INPUT 4)
Pin jack (x2)
L/R ..... 500mVrms/more than 10 kΩ

AUDIO INPUT (for INPUT 5)
Pin jack (x2)
L/R ..... 500mVrms/more than 10 kΩ

Accessories
Label for remote control unit..... 1
Connector indicator label..... 1
Screws 2
Operating Instructions..... 1
Warranty 1

Due to improvements, specifications and design are subject to change without notice.

• Accessories

• **Label for remote control unit**

PDA-5003 (AAX3051)

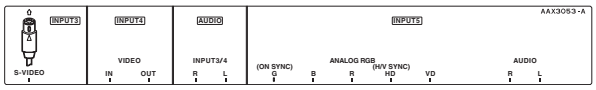
S-VIDEO VIDEO RGB (BNC)

PDA-5004

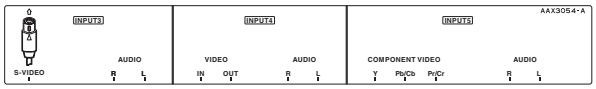
S-VIDEO VIDEO COMPONENT

• **Connector indicator label**

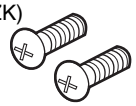
PDA-5003 (AAX3053)



PDA-5004 (AAX3054)



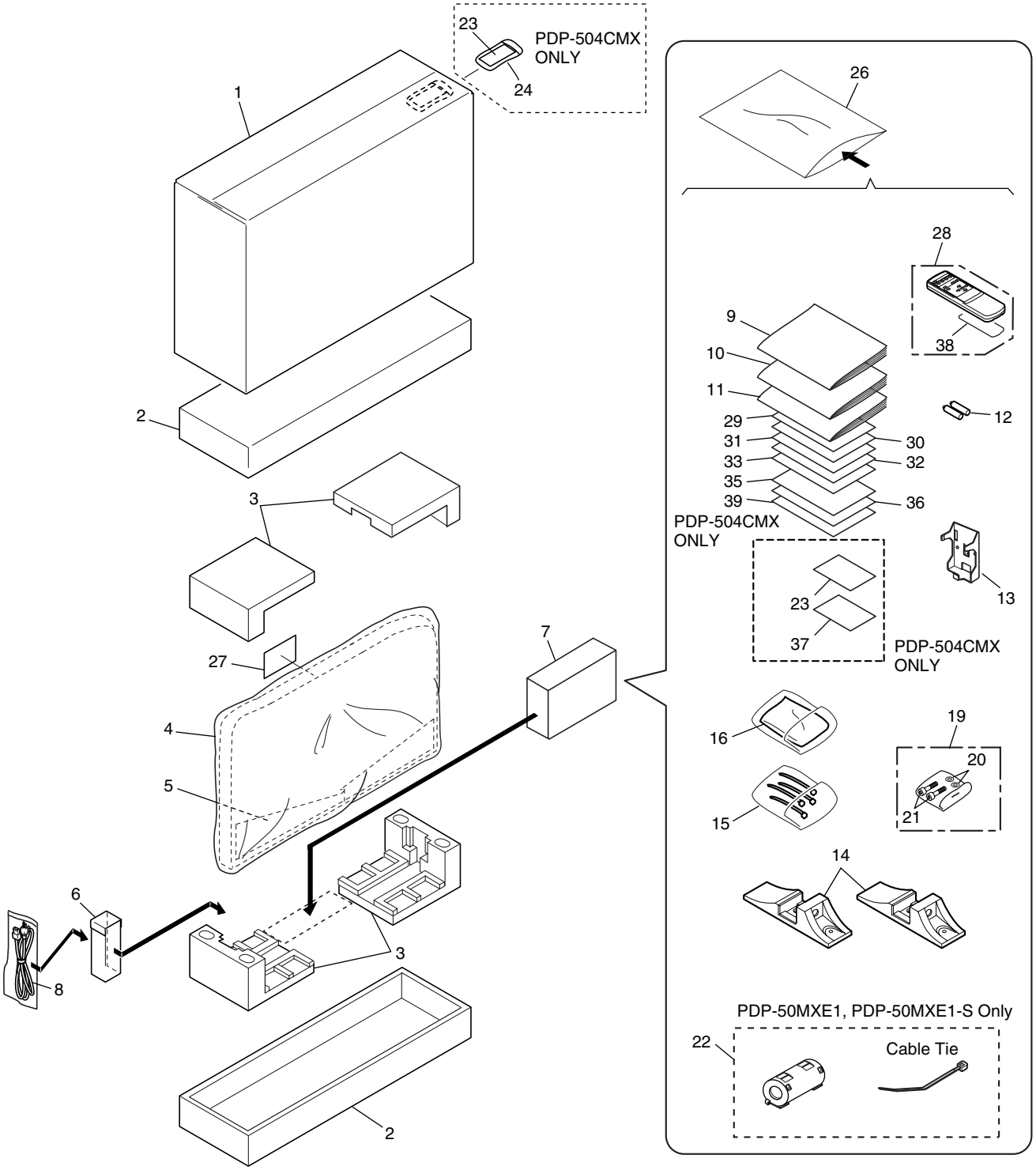
• **Screws (x2)**
(Accessory screws for installing video card)
(AMZ30P060FZK)



2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



PACKING Parts List

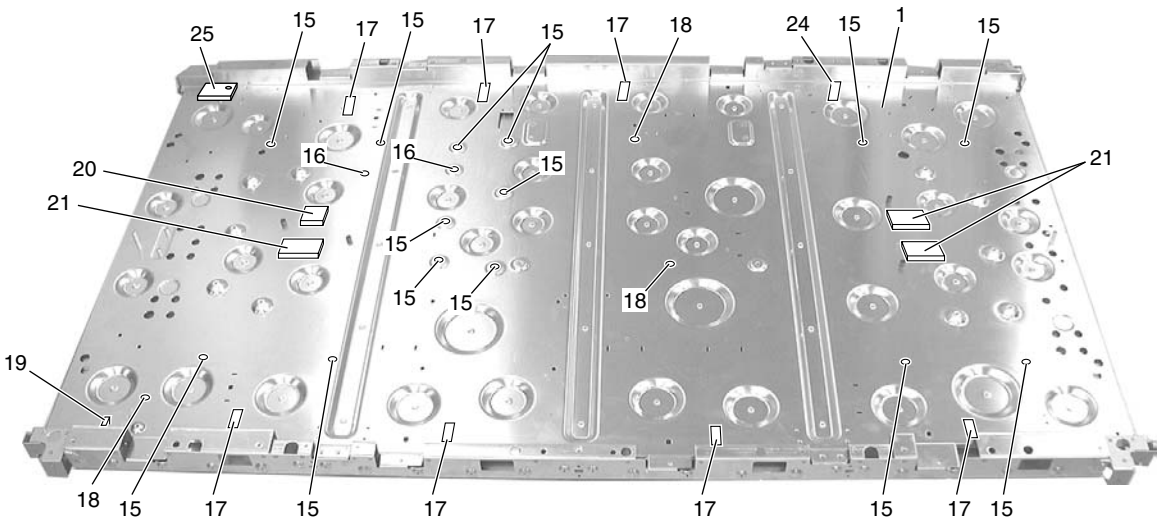
Mark	No.	Description	Part No.
	1	Upper Carton	See Contrast table(2)
	2	Under Carton	AHD3037
	3	Pad	AHA2280
	4	Mirror Mat	AHG1284
	5	Front Sheet	AHB1241
	6	Cord Case	AHC1037
	7	Accessory Case Assy	See Contrast table(2)
⚠	8	AC Power Cord	See Contrast table(2)
	9	Operating Instructions (Italian/Spanish/Dutch/Chinese)	See Contrast table(2)
	10	Operating Instructions (Japanese/English/French)	See Contrast table(2)
	11	Operating Instructions (English/French/German)	See Contrast table(2)
NSP	12	Battery (R6P, AA)	VEM1031
	13	Reomote Control Holder	AMR3268
	14	Display Stand	AMR3264
	15	Binder Assy (Speed Clamp x2, Bead Band x2)	AEC1758
	16	Wiping Cloth (for screen)	AED1208
	17	•••••	
	18	•••••	
	19	Screws Set	AXX1060
	20	Washer	WB80FZB
	21	Bolt	SMZ80H400FZB
	22	Ferrite Core	See Contrast table(2)
NSP	23	Warranty Card	See Contrast table(2)
NSP	24	Vinyl Bag	See Contrast table(2)
	25	•••••	
	26	Vinyl Bag	AHG1330
	27	Caution Sheet	ARM1201
	28	Remote Control Unit	AXD1486
	29	Plasma Caution Sheet	ARM1145
	30	Plasma Caution Sheet	ARM1147
	31	Plasma Caution Sheet	ARM1149
	32	Caution Sheet	ARM1176
	33	Caution Sheet	ARM1200
	34	•••••	
	35	Image Caution Sheet	ARM1220
	36	Caution Sheet	ARM1221
NSP	37	Warranty Card	See Contrast table(2)
	38	Battery Cover	AZN2462
	39	Image Stick Caution	See Contrast table(2)

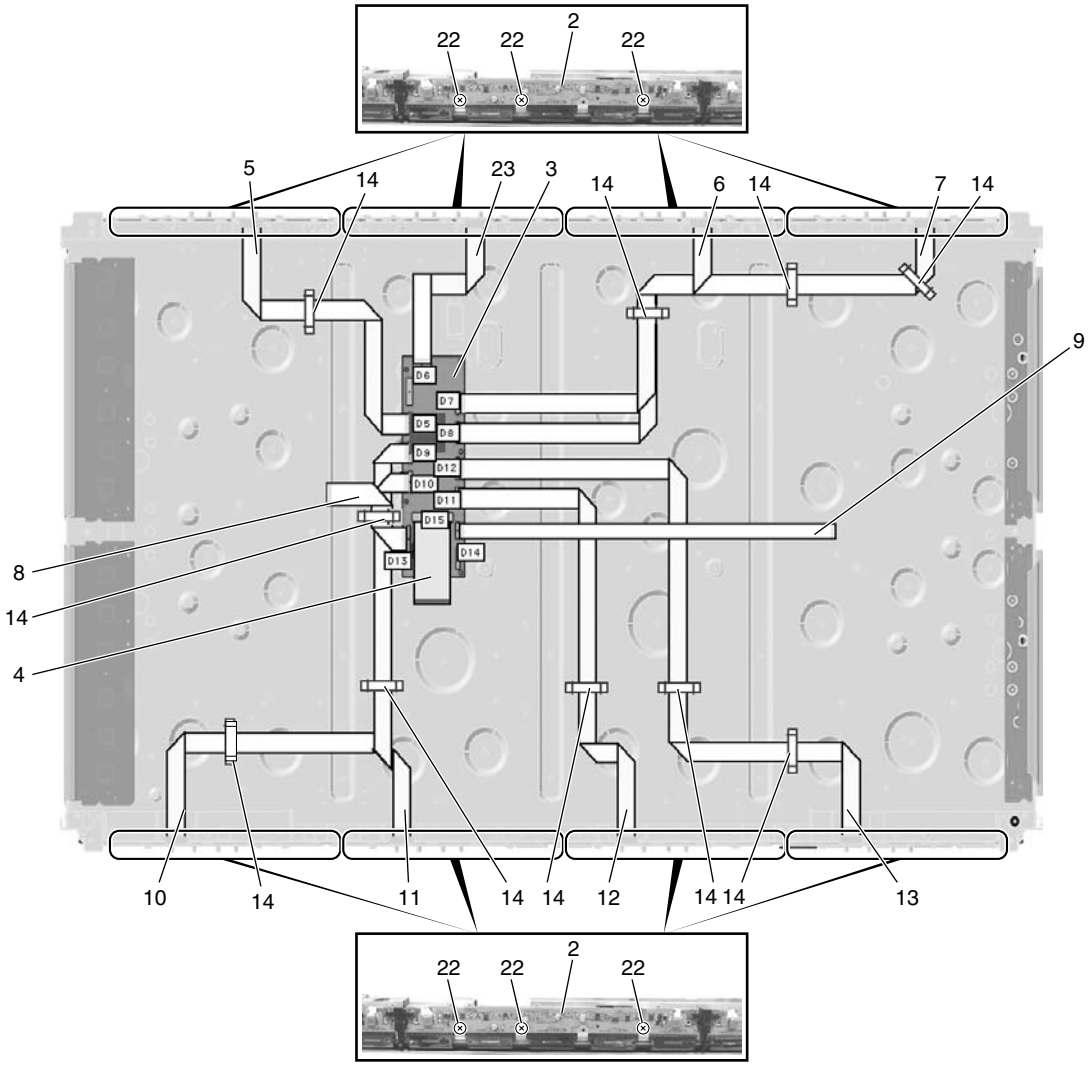
(2) CONTRAST TABLE

PDP-504CMX/LUC, PDP-504MXE1/LDFK and PDP-504MXE1-S/LDFK are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-504CMX/ LUC	PDP-504MXE1/ LDFK	PDP-504MXE1-S/ LDFK
	1	Upper Carton (504CMX)	AHD3216	Not used	Not used
	1	Upper Carton (50MXE1)	Not used	AHD3218	Not used
	1	Upper Carton (50MXE1-S)	Not used	Not used	AHD3219
NSP	7	Accessory Case Assy (CMX)	AXX1065	Not used	Not used
NSP	7	Accessory Case Assy (MXE)	Not used	AXX1066	AXX1066
⚠	8	AC Power Cord	ADG1215	Not used	Not used
	9	Operating Instructions (Italian/Spanish/Dutch/Chinese)	Not used	ARC1527	ARC1527
	10	Operating Instructions (Japanese/English/French)	ARD1055	Not used	Not used
	11	Operating Instructions (English/French/German)	Not used	ARE1377	ARE1377
	22	Ferrite Core	Not used	ATX1039	ATX1039
NSP	23	Warranty Card	ARY1093	Not used	Not used
NSP	24	Vinyl Bag	AHG-195	Not used	Not used
NSP	37	Warranty Card	ARY1146	Not used	Not used
	39	Image Stick Caution	ARM1240	Not used	Not used

2.2 CHASSIS SECTION (1)

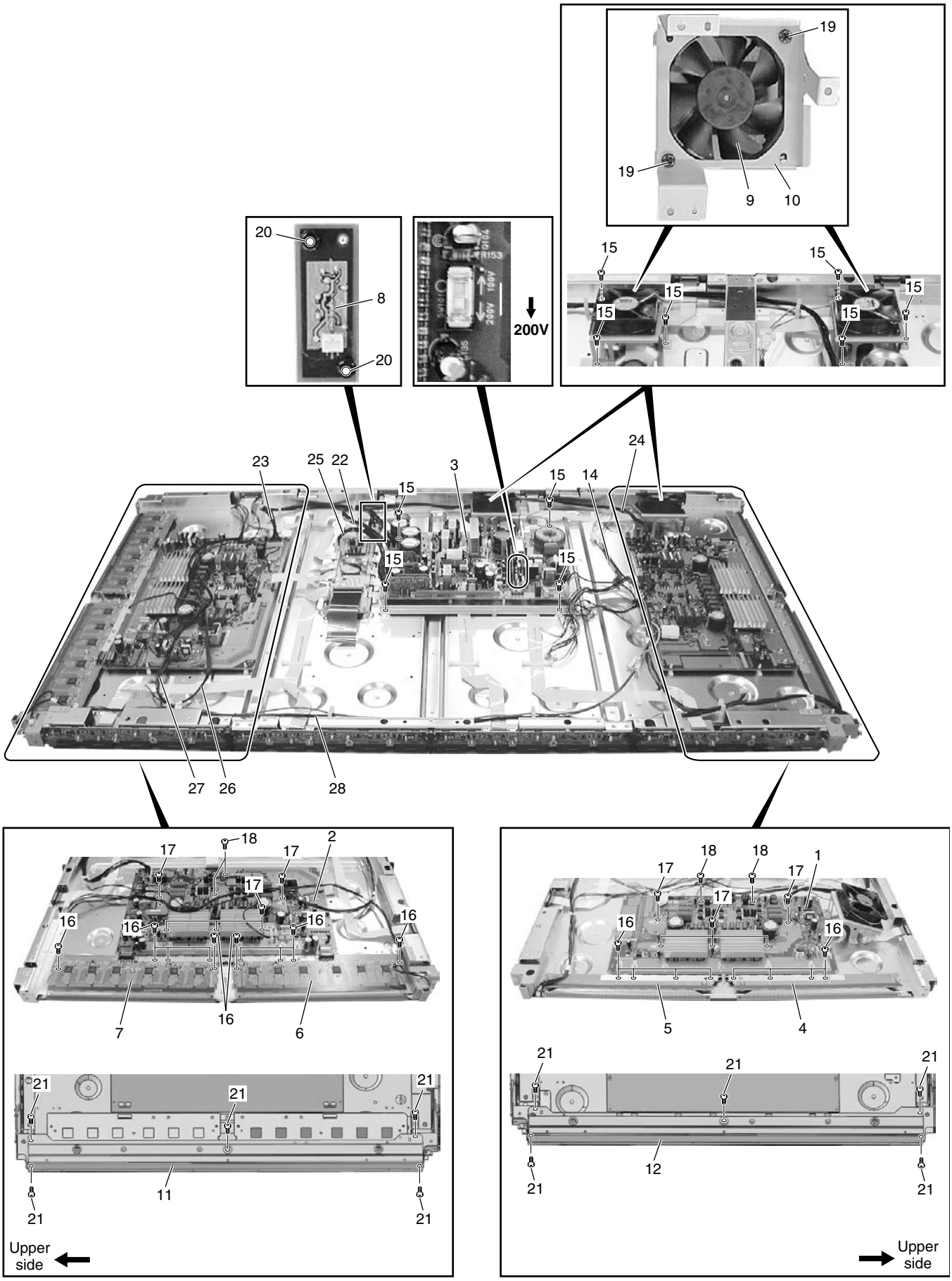




CHASSIS SECTION (1) parts List

Mark	No.	Description	Part No.
NSP	1	P. Chassis (50) Assy	AWU1081
NSP	2	50 ADDRESS Assy	AWZ6839
	3	DIGITAL VIDEO Assy	AWV2100
	4	FPC (114P)	ADY1081
	5	Flexible Cable (J201)	ADD1248
	6	Flexible Cable (J203)	ADD1250
	7	Flexible Cable (J204)	ADD1251
	8	Flexible Cable (J209)	ADD1236
	9	Flexible Cable (J210)	ADD1237
	10	Flexible Cable (J205)	ADD1252
	11	Flexible Cable (J206)	ADD1253
	12	Flexible Cable (J207)	ADD1254
	13	Flexible Cable (J208)	ADD1255
	14	Flat Clamp	AEC1879
	15	PCB Spacer	AEC1941
	16	PCB Support	AEC1938
	17	Wire Saddle	AEC1745
	18	PCB Spacer	AEC1947
	19	Wire Clip	AEC1948
	20	Drive Silicone Sheet C	AEH1066
	21	Drive Silicone Sheet B	AEH1065
	22	Screw	VBB30P080FNI
	23	Flexible Cable (J202)	ADD1249
	24	Wire Clip	AEC1992
	25	Siricon Sheet SC	AEH1076

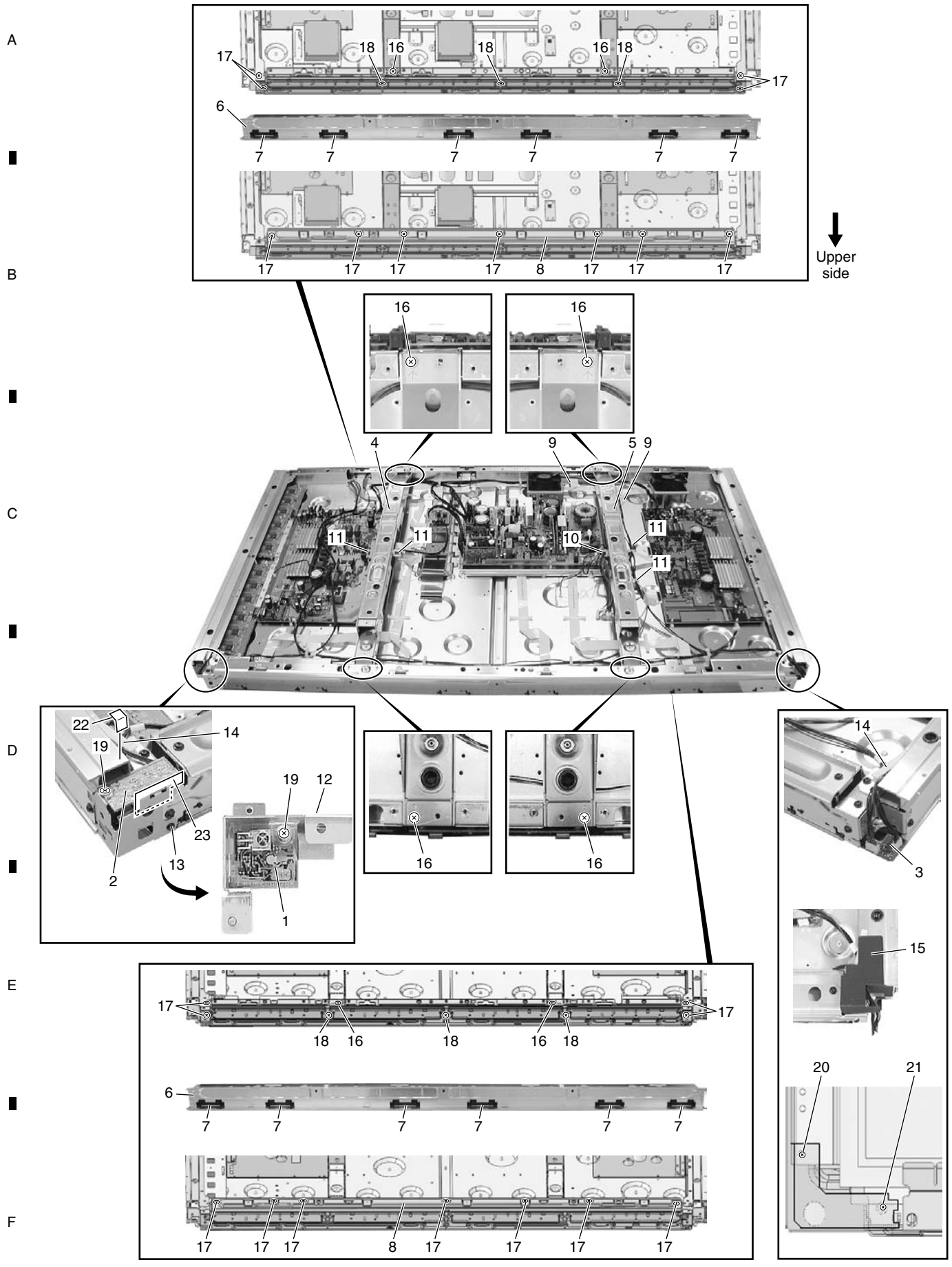
2.3 CHASSIS SECTION (2)



CHASSIS SECTION (2) parts List

Mark	No.	Description	Part No.
	1	50 X DRIVE Assy	AWZ6808
	2	50 Y DRIVE Assy	AWV2035
⚠	3	POWER SUPPLY Unit	AXY1083
NSP	4	X CONNECTOR B Assy	AWZ6811
NSP	5	X CONNECTOR A Assy	AWZ6812
NSP	6	50 SCAN A Assy	AWZ6809
NSP	7	50 SCAN B Assy	AWZ6810
	8	PANEL SENSOR Assy	AWZ6795
	9	Fan Motor (80 x 25)	AXM1044
	10	Fan Angle	ANG2609
	11	F. Chassis VL (50M)	ANA1753
	12	F. Chassis VR (50M)	ANA1754
	13	•••••	
	14	Housing Wire (J117)	ADX2897
	15	Screw	ABZ30P060FMC
	16	Screw	PMB30P060FNI
	17	Screw	VBB30P080FNI
	18	Screw	PMB40P080FZK
	19	Screw	PPZ50P100FZK
	20	Nylon Rivet	AEC1671
	21	Screw	AMZ30P060FZK
	22	3P Housing Wire (J109)	ADX2847
	23	11P Housing Wire (J102)	ADX2853
	24	12P Housing Wire (J103)	ADX2854
	25	Wire A (J101)	ADX2839
	26	WireD (J118)	ADX2898
	27	Wire E (J119)	ADX2909
	28	9P Housing Wire (J115)	ADX2895

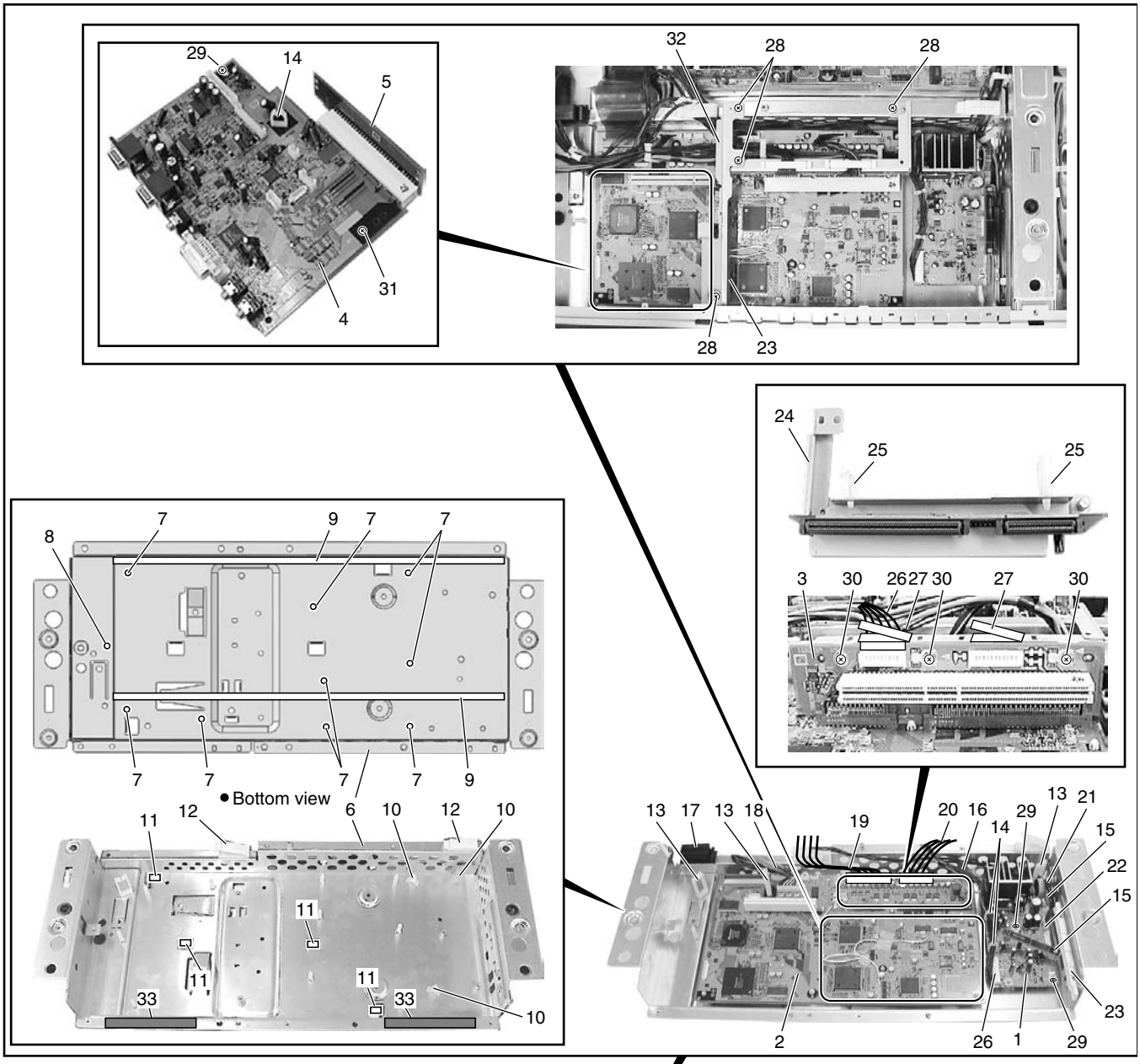
2.4 FRAME SECTION



FRAME SECTION parts List

Mark	No.	Description	Part No.
	1	IR RECEIVE Assy	AWZ6855
	2	KEY CONTROL Assy	AWZ6853
	3	LED OPT Assy	AWZ6854
	4	Sub Frame L Assy (50M)	ANG2596
	5	Sub Frame R Assy (50M)	ANG2598
NSP	6	Front Chassis H (50)	ANA1733
	7	Front Spacer (CMX)	AMR3384
	8	Rear Frame (50M)	ANG2602
	9	Wire Clip	AEC1948
	10	Wire Clip	AEC1992
	11	Wire Saddle	AEC1745
NSP	12	IR Holder	ANG2551
	13	Nylon Rivet	AEC1671
	14	Flat Clamp	AEC1879
	15	Enclosure Sheet 1	AMR3405
	16	Screw	AMZ30P080FMC
	17	Screw	AMZ30P060FZK
	18	Screw	APZ30P080FZK
	19	Screw	ABZ30P060FMC
	20	Nylon Rivet	AEC1997
	21	Screw	BBZ30P050FMC
	22	Enclosure Sheet 2 (V)	AMR3411
	23	Enclosure Sheet 3	AMR3407

2.5 MULTI BASE SECTION



MULTI BASE SECTION parts List

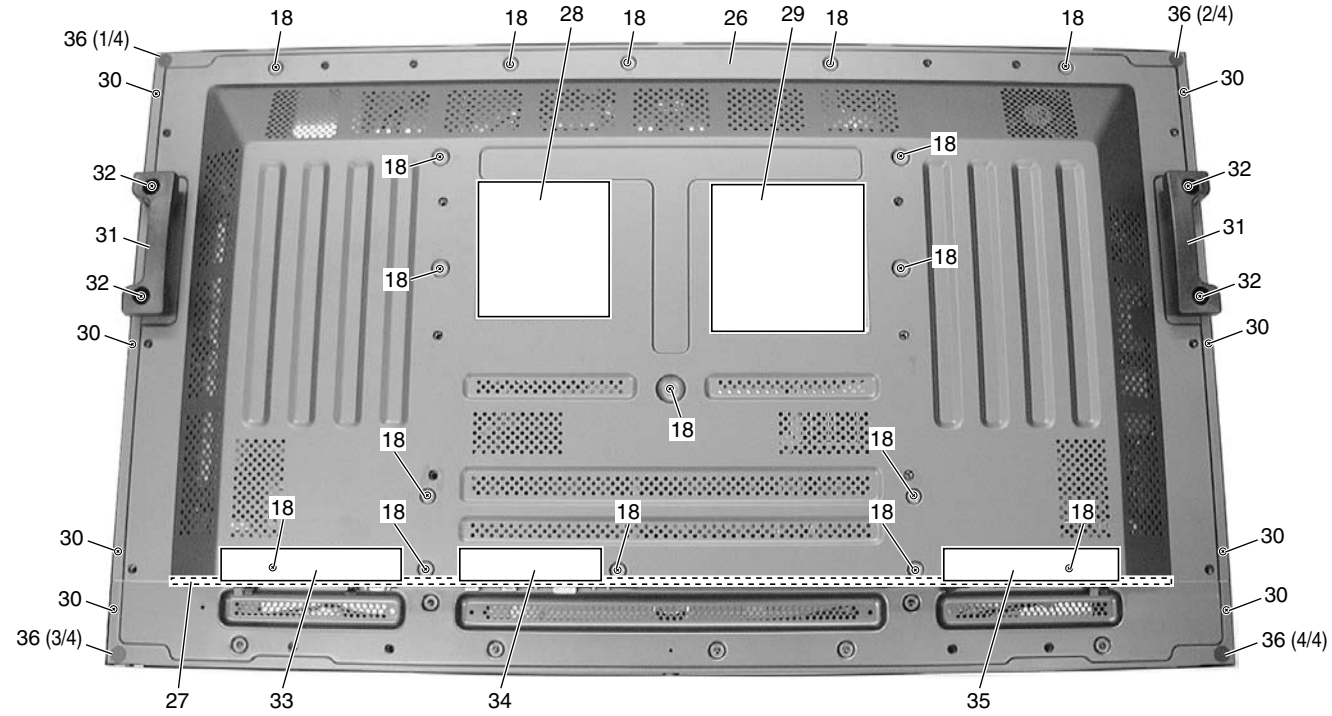
Mark	No.	Description	Part No.
	1	AUDIO AMP Assy	AWZ6848
	2	RGB Assy	AWZ6883
	3	VIDEO SLOT I/F Assy	See Contrast table(2)
	4	AV I/O Assy	See Contrast table(2)
	5	AV I/O I/F Assy	AWZ6859
NSP	6	Multi Base (CMX)	ANA1757
NSP	7	PCB Holder	AEC1088
	8	PCB Spacer	AEC1991
	9	Gasket C-M	ANK1737
	10	Locking Card Spacer	AEC1429
	11	Ground Finger	ANG2468
	12	Clamp	AEC1884
	13	Wire Saddle	AEC1989
	14	Mini Clamp	AEC1971
	15	Double Locking Spacer	AEC1988
	16	15P/16P Housing Wire (J106)	ADX2907
	17	Cable Clamp	AEC1707
	18	10/11P Housing Wire (J110)	ADX2890
	19	10P Housing Wire (J113)	ADX2908
	20	12P Housing Wire (J112)	ADX2892
	21	13P/6P Housing Wire (J104)	ADX2910
	22	COVER Assy	AWZ6858
	23	Guide Rail EX	AEC1994
	24	Slot Stay	ANG2608
	25	Wire Saddle	AEC1745
	26	11P Housing Wire (J111)	ADX2891
	27	Flat Clamp	AEC1879
	28	Screw	AMZ30P060FZK
	29	Screw	PMB30P060FNI
	30	Screw	VBB30P080FNI
	31	Pin Grommet	AEC1015
	32	Video Stay	ANG2607
	33	Gasket M-T	ANK1738

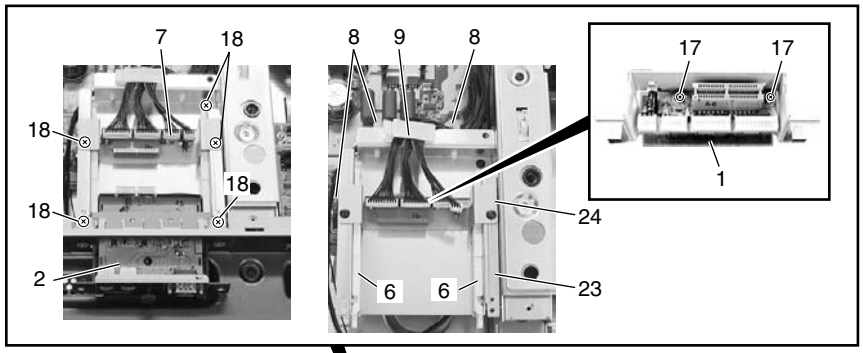
(2) CONTRAST TABLE

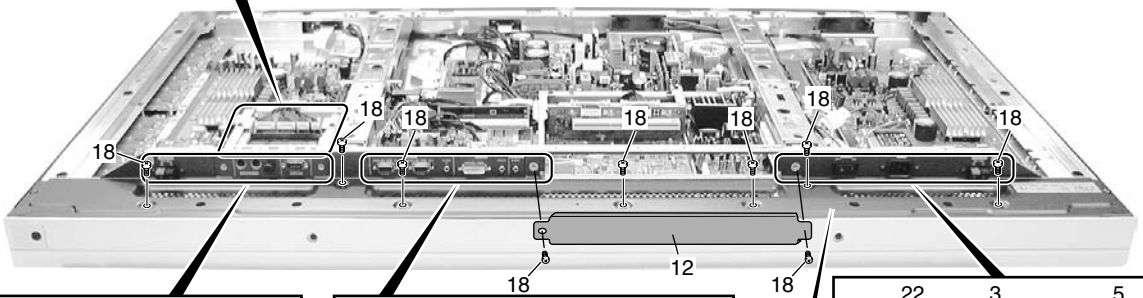
PDP-504CMX/LUC, PDP-504MXE1/LDFK and PDP-504MXE1-S/LDFK are constructed the same except for the following:

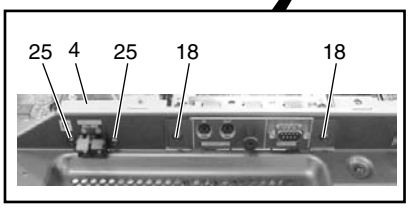
Mark	No.	Symbol and Description	PDP-504CMX/ LUC	PDP-504MXE1/ LDFK	PDP-504MXE1-S/ LDFK
	3	VIDEO SLOT I/F Assy	AWZ6851	AWZ6901	AWZ6901
	4	AV I/O Assy	AWZ6847	AWZ6893	AWZ6893

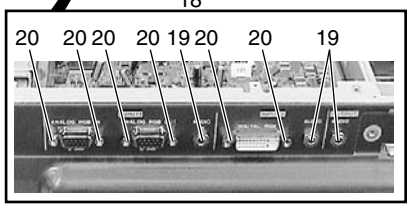
2.6 TERMINAL PANEL and REAR SECTION

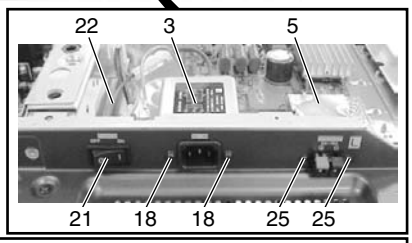


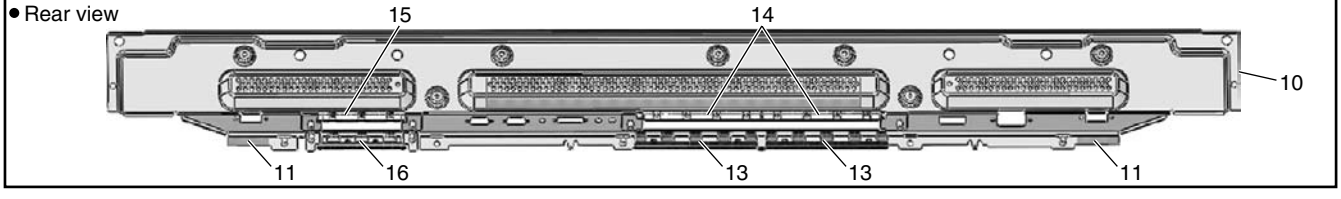












TERMINAL PANEL and REAR SECTION parts List

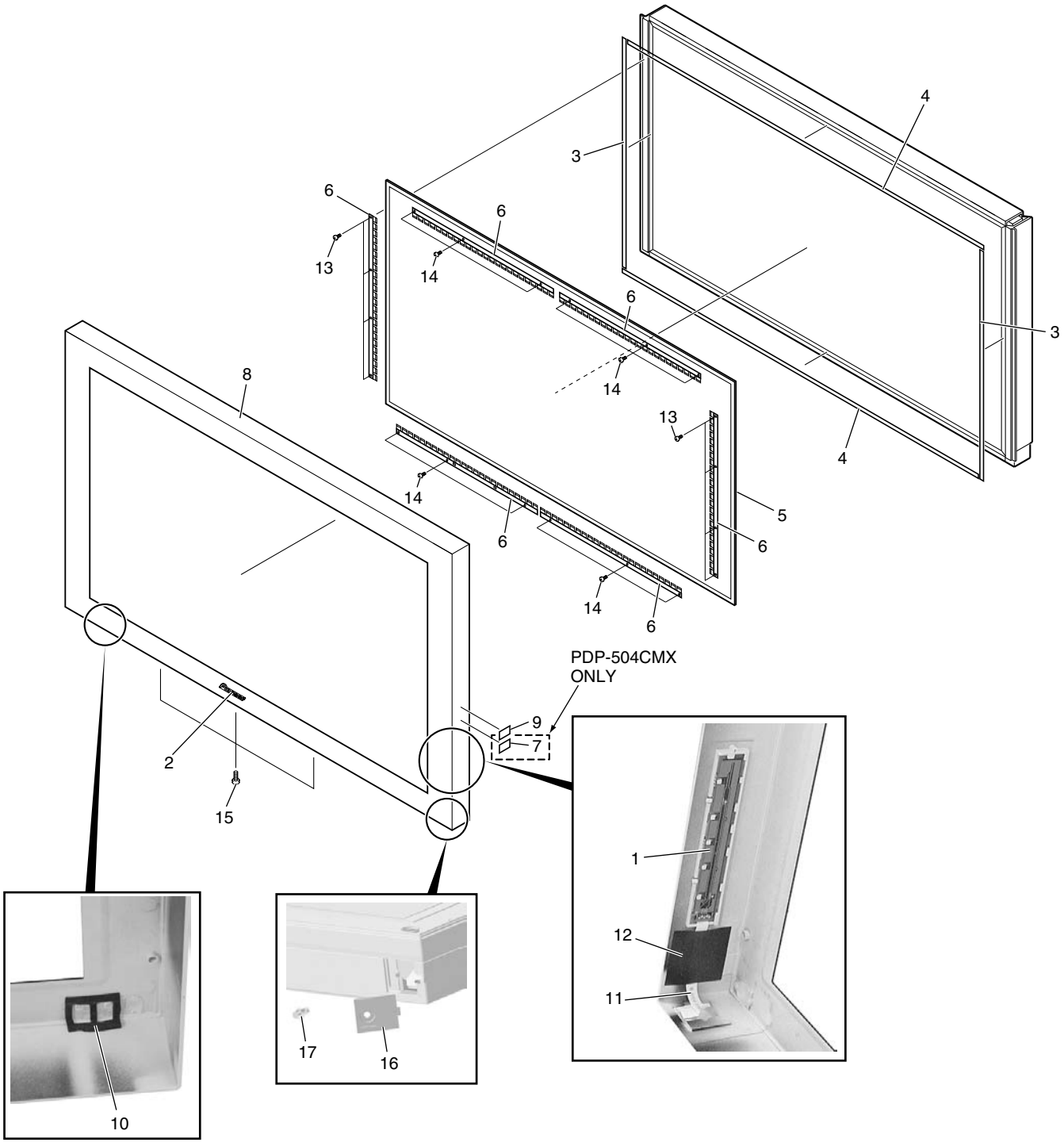
Mark	No.	Description	Part No.
	1	COMM SLOT I/F Assy	AWZ6850
	2	COMM SLOT Assy	AWZ6849
⚠	3	AC Inlet (CN1)	AKP1255
	4	SP TERMINAL R Assy	See Contrast table(2)
	5	SP TERMINAL L Assy	AWZ6856
	6	Guide Rail EX	AEC1994
	7	6P Housing Wire (J108)	ADX2889
	8	Wire Saddle	AEC1745
	9	Clamp	AEC1884
	10	Terminal Panel (504CMX)	ANG2603
	11	Gasket SP-T	ANK1734
	12	Slot Panel 262 (N)	ANG2610
	13	Slot Spring B126	ABK1033
	14	Slot Spring T130	ABK1032
	15	Slot Spring T94	ABK1034
	16	Slot Spring B92	ABK1035
	17	Screw	VBB30P080FNI
	18	Screw	AMZ30P060FZK
	19	Nut	ABN1040
	20	Hexagon Head Screw	BBA1051
⚠	21	Power Switch (S1)	ASG1094
	22	Housing Wire (MX)(J116)	ADX2896
	23	COMM Stay A	ANG2605
	24	COMM Stay B	ANG2606
	25	Screw	APZ30P060FZK
	26	Rear Case (50M)	ANE1623
	27	Gasket T-R50	ANK1735
NSP	28	Name Label	See Contrast table(2)
	29	Caution Label	AAX3048
	30	Screw	TBZ40P080FZK
	31	Grip	AMR3380
	32	Screw	HMB50P140FZK
	33	Terminal Label R (50M2)	AAX3063
	34	Terminal Label C (M)	AAX3064
	35	Terminal Label L	See Contrast table(2)
	36	Rear Corner Label (15)	AAX3081

(2) CONTRAST TABLE

PDP-504CMX/LUC, PDP-504MXE1/LDFK and PDP-504MXE1-S/LDFK are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-504CMX/ LUC	PDP-504MXE1/ LDFK	PDP-504MXE1-S/ LDFK
	4	SP TERMINAL R Assy	AWZ6857	AWZ6896	AWZ6896
NSP	28	Name Label (504CMX)	AAL2516	Not used	Not used
NSP	28	Name Label (50MXE1)	Not used	AAL2517	Not used
NSP	28	Name Label (50MXE1-S)	Not used	Not used	AAL2519
	35	Terminal Label L (50M)	AAX3061	Not used	Not used
	35	Terminal Label L (MXE)	Not used	AAX3065	AAX3065

2.7 FRONT SECTION



FRONT SECTION parts List

Mark	No.	Description	Part No.
	1	SIDE KEY Assy	AWZ6852
	2	PIONEER Badge	AAM1101
	3	Panel Cushion V	AED1199
	4	Panel Cushion H	AED1226
⚠	5	Protect Panel Assy (50)	AMR3348
NSP	6	Panel Holder (50)	ANG2563
	7	Display Label	See Contrast table(2)
	8	Front Case	See Contrast table(2)
	9	Energy Star Label	See Contrast table(2)
	10	Blind Cushion	AEB1400
	11	Flexible Cable (J211)	ADD1256
	12	Flexible Seal	AEH1074
	13	Screw	ABZ30P060FMC
	14	Screw	APZ30P080FZK
	15	Screw	APZ30P120FZK
	16	Lead Cover	See Contrast table(2)
	17	Rivet	AEC1877

(2) CONTRAST TABLE

PDP-504CMX/LUC, PDP-504MXE1/LDFK and PDP-504MXE1-S/LDFK are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-504CMX/ LUC	PDP-504MXE1/ LDFK	PDP-504MXE1-S/ LDFK
	7	Display Label	AXX2836	Not used	Not used
	8	Front Case 504 (CMX)	AMB2788	AMB2788	Not used
	8	Front Case 504S (CMX)	Not used	Not used	AMB2797
	9	Energy Star Label	AAX2856	AAX2856	AAX2865
	16	Lead Cover (4G)	AMR3394	AMR3394	Not used
	16	Lead Cover S (4G)	Not used	Not used	AMR3395

2.8 PANEL CHASSIS (50) ASSY (AWU1081)

Panel Chassis (50) Assy (AWU1081)

• Parts List

Mark	No.	Description	Part No.
NSP		1..50 ADDRESS Assy	AWV2069
NSP		2..50 ADDRESS Assy	AWZ6839
NSP		1..50 SCAN FUKUGO Assy	AWV2036
NSP		2..50 SCAN A Assy	AWZ6809
NSP		2..50 SCAN B Assy	AWZ6810
NSP		2..X CONNECTOR A Assy	AWZ6811
NSP		2..X CONNECTOR B Assy	AWZ6812
NSP		Address Module (IC1-IC40)	AXF1116
NSP		Plasma Panel Assy (50")(V1)	AAV1244
NSP		FPC (50XGA-X)	ADY1084
NSP		FPC (50XGA-Y)	ADY1085
NSP		Chassis Assy (50)	ANA1774
		Edge Card Spacer	AEC1998
		PCB Spacer	AEC1944
		PCB Support	AEC1958
		Rivet	AMR1066
		FC Spacer	AMR3370
		Adhesive	ZBA-KE3424G
NSP		Cleaner	ZLX-AP7
NSP		Tape	ZTA-8101-12
NSP		Double Faced Tape	ZTB-5015-18
NSP		Tape	ZTC-POLYCA-11
NSP		Tape	ZTC-POLYCA-20
NSP		Tape	ZTB-5015-9
NSP		Tape	ZTC-900UL-15
NSP		Silicone Rubber	ZTX-HC20-15
NSP		Wiping Cloth	ZTX-MX100-13
NSP		Film	ZTX-2102Y35-2R5
NSP		Film	ZTX-2102Y45-5
NSP		Silicone Rubber	ZTX-HC50-15
NSP		Silicone Rubber	ZTC-EM7KBOR85T-15W

2.9 PDP SERVICE ASSY (AWU1095)

PDP SERVICE Assy (AWU1095)

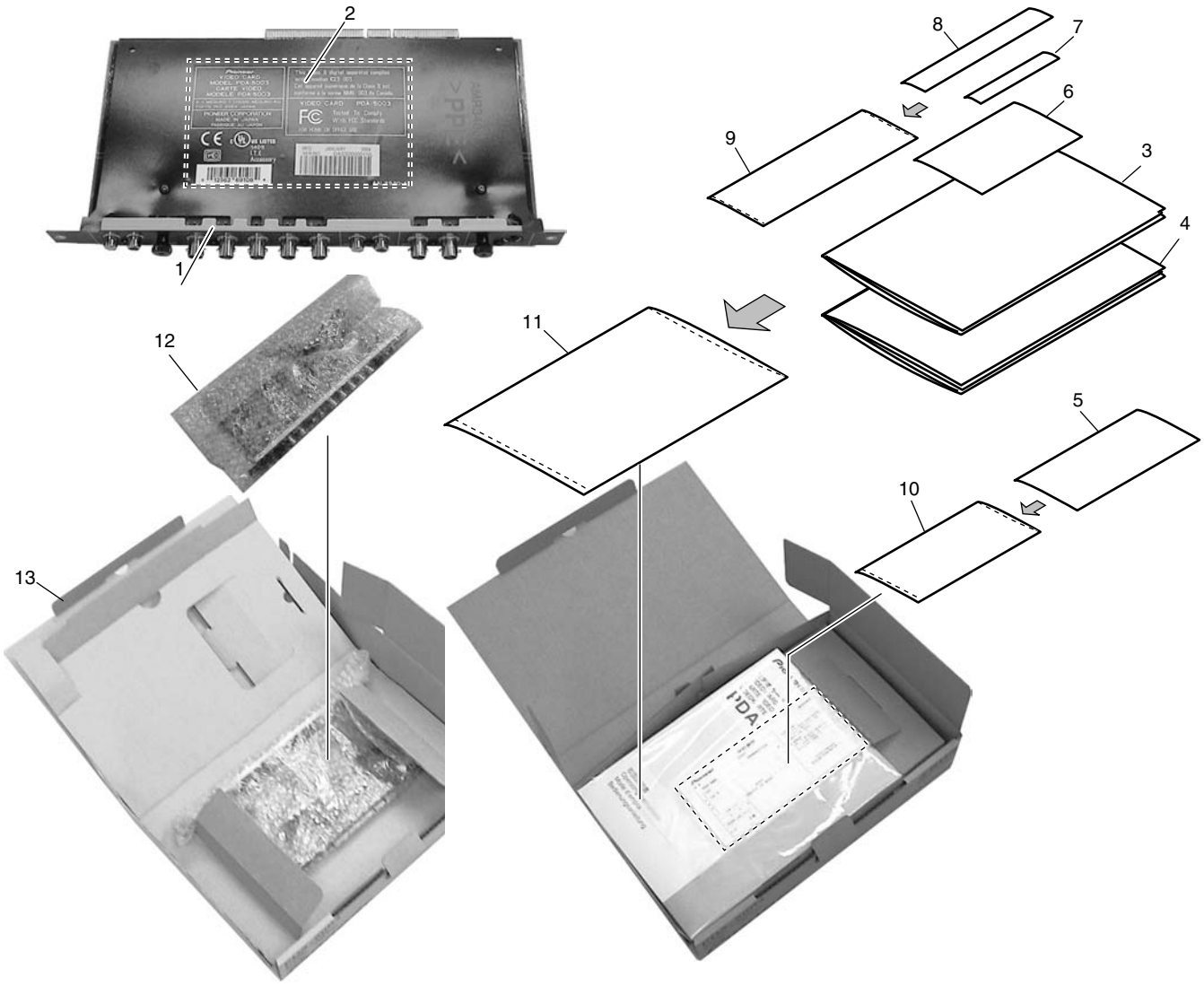
• Parts List

Mark	No.	Description	Part No.
NSP		P. Chassis (50) Assy	AWU1081
NSP		Front Chassis H (50)	ANA1733
		F. Chassis VL (50M)	ANA1753
		F. Chassis VR (50M)	ANA1754
		Sub Frame L Assy (50M)	ANG2596
		Sub Frame R Assy (50M)	ANG2598
		Rear Frame (50M)	ANG2602
NSP		SVC.Terminal P504CMX	ANG2680
		Wire Saddle	AEC1745
		PCB Support	AEC1938
		PCB Spacer	AEC1941
		PCB Spacer	AEC1947
		Wire Clip	AEC1948
		Panel Cushion V	AED1199
		Panel Cushion H	AED1226
		Front Spacer (CMX)	AMR3384
		Wire Clip	AEC1992
		Enclosure Sheet 1	AMR3405
		Enclosure Sheet 2 (V)	AMR3411
		Caution Label	AAX3031
NSP		Drive Voltage Label	ARW1097
		Screw	AMZ30P060FZK
		Screw	AMZ30P080FMC
		Screw	APZ30P080FZK
		Screw	APZ30P120FZK
		Screw	TBZ40P080FZK
		Screw	VBB30P080FNI
NSP		Front Case (504CMX SVC)	AMB2839
		Rear Case (50M)	ANE1623
		Pad	AHA2280
		Under Carton	AHD3037
NSP		Upper Carton 504CMX S	AHD3256
		Protect Sheet	AHG1331
		Siricon Sheet SC	AEH1076

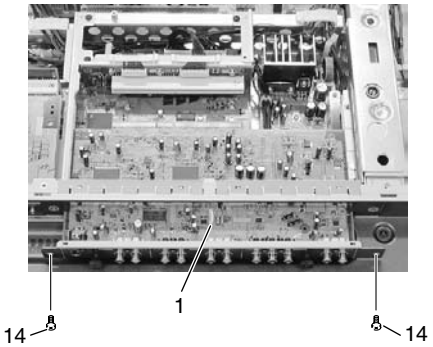
2.10 VIDEO CARD

• Packing

Photos and illustrations are the PDA-5003, however the packing method of the PDA-5004 is the same as the PDA-5003.



• Exterior



VIDEO CARD parts List

Mark	No.	Description	Part No.
	1	VIDEO SLOT 1 Assy	See Contrast table(2)
NSP	2	Name Label	See Contrast table(2)
	3	Operating Instructions (Italian/Spanish/Dutch/Chinese)	ARC1528
	4	Operating Instructions (Japanese/English/French/German)	ARD1056
NSP	5	Warranty Card	ARY1093
NSP	6	Warranty Card	ARY1137
	7	Label	AAX3051
	8	Terminal Label	See Contrast table(2)
NSP	9	Vinyl Bag	AHG-064
NSP	10	Vinyl Bag	AHG-195
	11	Vinyl Bag	AHG1310
	12	Sheet	AHG1344
	13	Packing Case	See Contrast table(2)
	14	Screw	AMZ30P060FZK

(2) CONTRAST TABLE

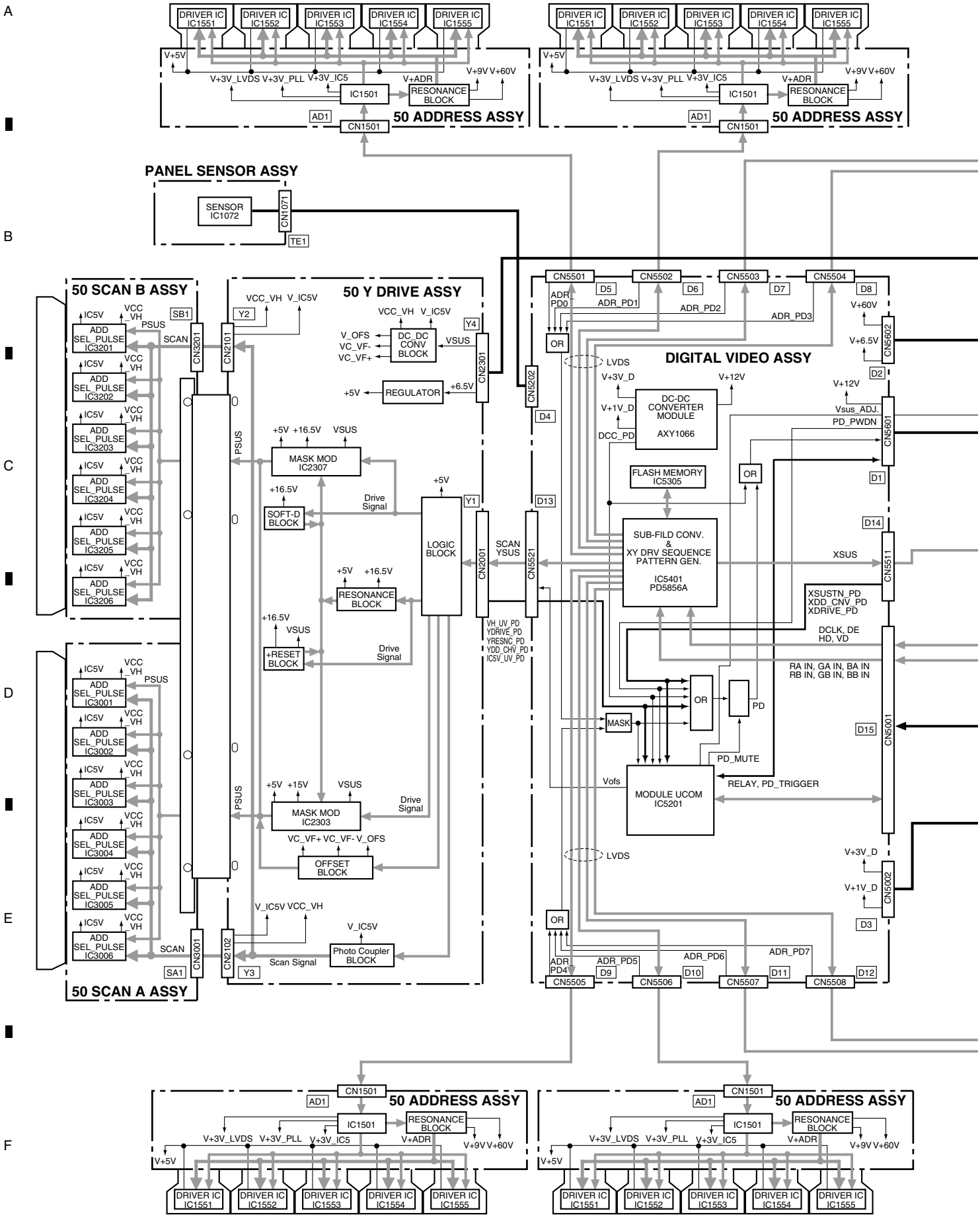
PDA-5003/UCYV and PDA-5004/UCYV are constructed the same except for the following:

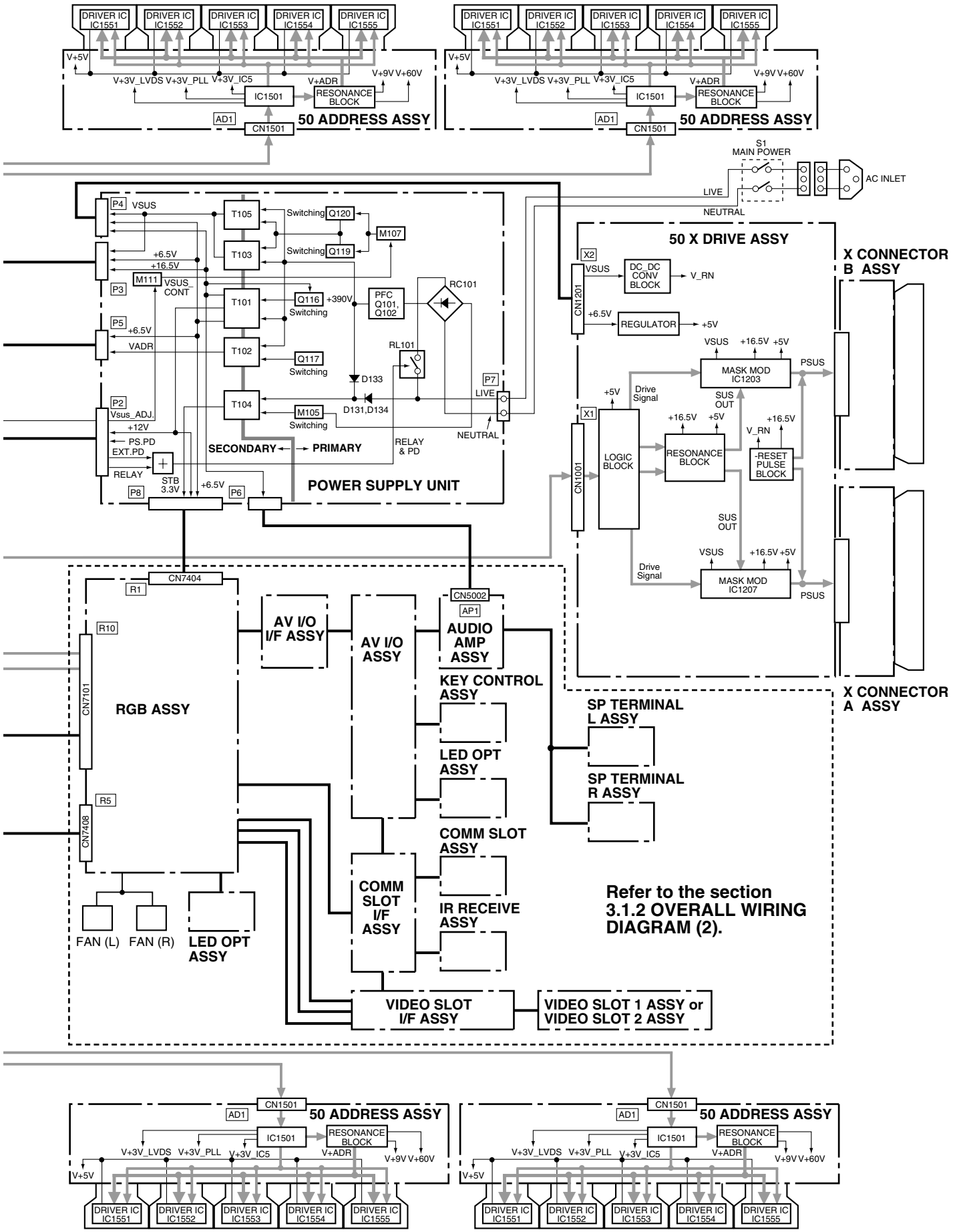
Mark	No.	Symbol and Description	PDA-5003/ UCYV	PDA-5004/ UCYV
	1	VIDEO SLOT 1 Assy	AWV2097	Not used
	1	VIDEO SLOT 2 Assy	Not used	AWV2098
NSP	2	Name Label (5003)	AAL2520	Not used
NSP	2	Name Label (5004)	Not used	AAL2521
	8	Terminal Label (5003)	AAX3053	Not used
	8	Terminal Label (5004)	Not used	AAX3054
	13	Packing Case	AHD3220	AHD3221

3. BLOCK DIAGRAM AND SCHEMATIC DIAHRAM

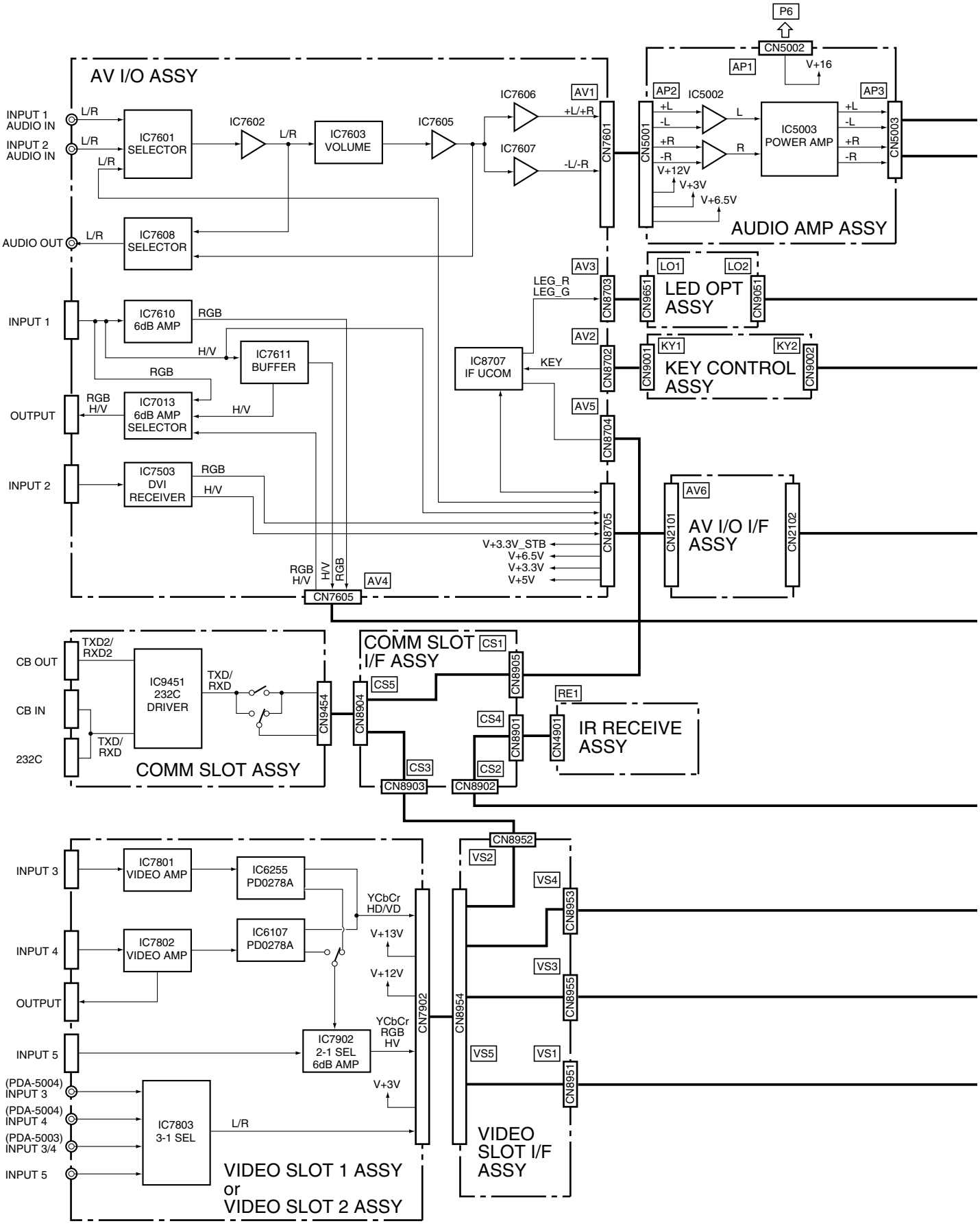
3.1 BLOCK DIAGRAM

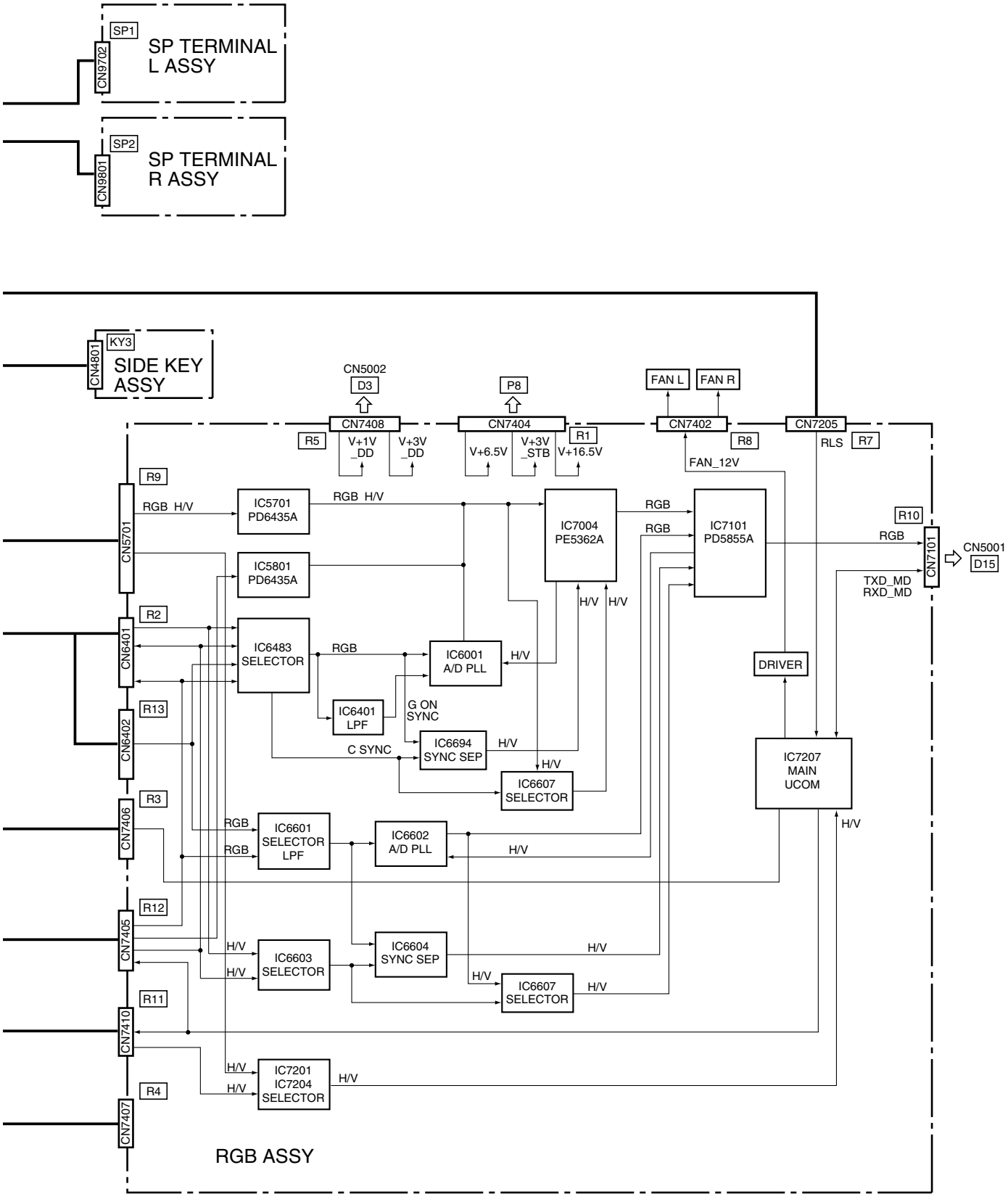
3.1.1 OVERALL BLOCK DIAGRAM (1/2)



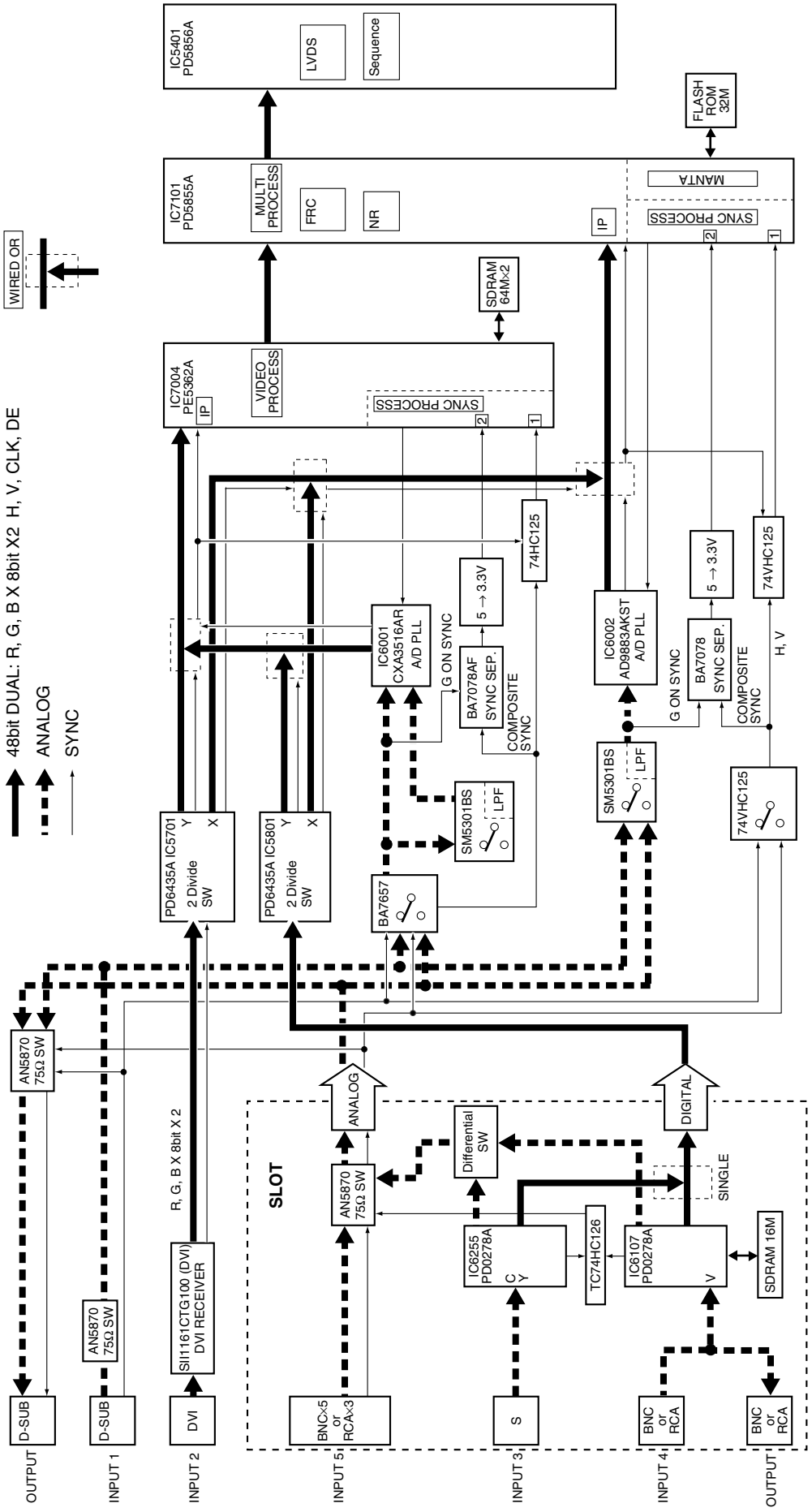

DRIVER IC IC1551
DRIVER IC IC1552
DRIVER IC IC1553
DRIVER IC IC1554
DRIVER IC IC1555
V+5V
V+3V_LVDS V+3V_PLL V+3V_IC5
V+ADR
V+9V V+60V
IC1501
RESONANCE BLOCK
AD1
CN1501
50 ADDRESS ASSY
S1
MAIN POWER
LIVE
NEUTRAL
AC INLET
P4 VSUS
T105
Switching Q120
M107
T103
Switching Q119
+6.5V
+16.5V
M111 VSUS CONT
P3
T101
Q116 +390V
Switching
PFC Q101, Q102
RC101
P5 +6.5V
VADR
T102
Q117
Switching
RL101
D133
P2 Vsus_ADJ.
+12V
PS.PD
EXT.PD
RELAY
T104
M105
Switching
D131,D134
P7 LIVE
NEUTRAL
SECONDARY
PRIMARY
RELAY & PD
STB 3.3V
+6.5V
P8
P6
POWER SUPPLY UNIT
50 X DRIVE ASSY
X2
VSUS
DC_DC CONV BLOCK
V_RN
CN1201
+6.5V
REGULATOR
+5V
VSUS +16.5V +5V
MASK MOD IC1203
PSUS
+5V
Drive Signal
SUS OUT
X1
LOGIC BLOCK
+16.5V +5V
RESONANCE BLOCK
-RESET PULSE BLOCK
+16.5V
V_RN
CN1001
SUS OUT
VSUS +16.5V +5V
Drive Signal
MASK MOD IC1207
PSUS
X CONNECTOR B ASSY
X CONNECTOR A ASSY
CN7404
R1
R10
CN7101
RGB ASSY
R5
CN7408
FAN (L)
FAN (R)
LED OPT ASSY
AV I/O I/F ASSY
AV I/O ASSY
CN5002
AP1
AUDIO AMP ASSY
KEY CONTROL ASSY
LED OPT ASSY
COMM SLOT ASSY
COMM SLOT I/F ASSY
IR RECEIVE ASSY
SP TERMINAL L ASSY
SP TERMINAL R ASSY
VIDEO SLOT I/F ASSY
VIDEO SLOT 1 ASSY or VIDEO SLOT 2 ASSY
Refer to the section 3.1.2 OVERALL WIRING DIAGRAM (2).

3.1.2 OVERALL BLOCK DIAGRAM (2/2)

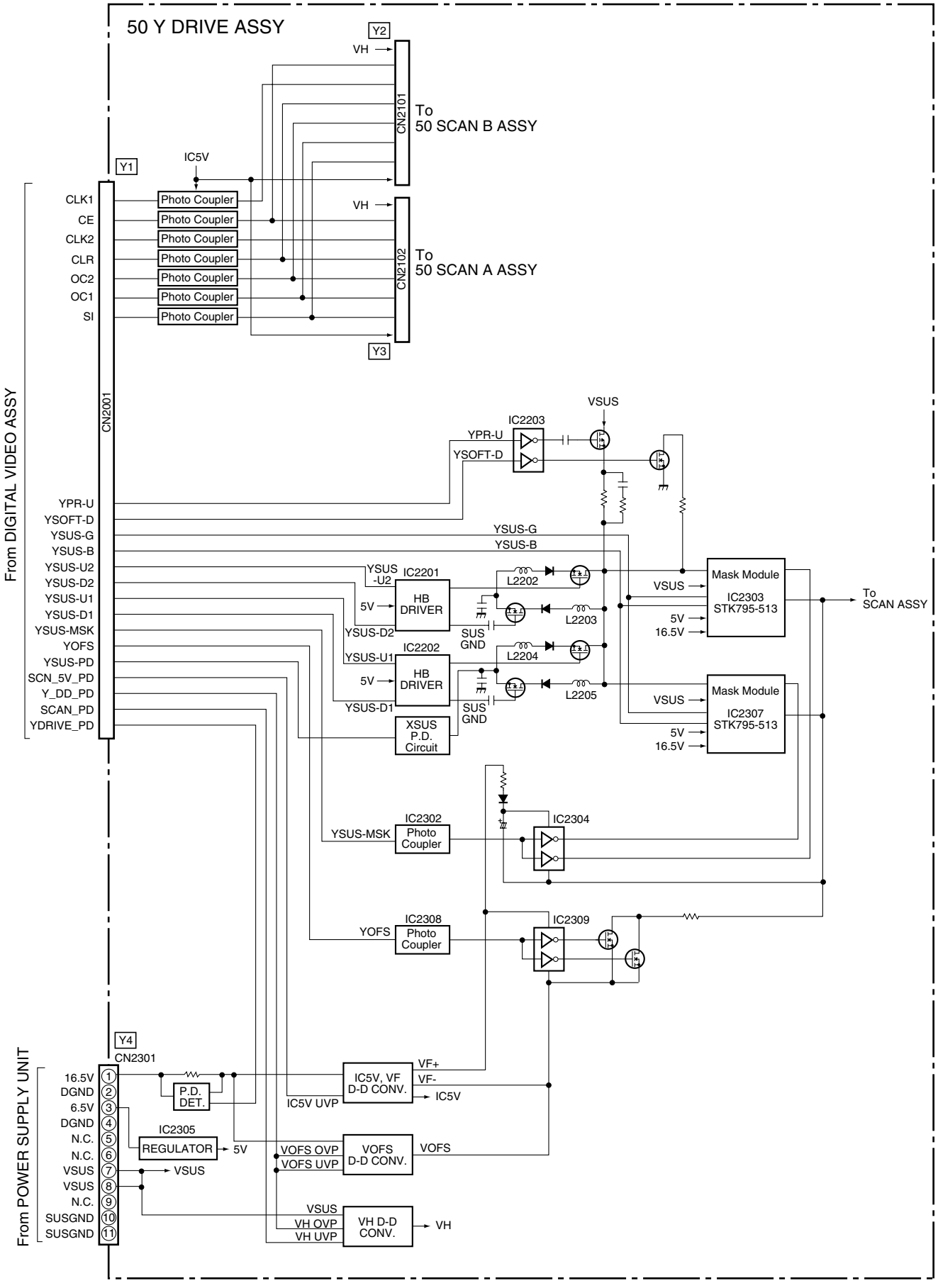



SP1
CN9702
SP TERMINAL L ASSY
SP2
CN9801
SP TERMINAL R ASSY
KY3
CN4801
SIDE KEY ASSY
CN5002
D3
P8
FAN L
FAN R
CN7408
CN7404
CN7402
CN7205
R5
V+1V _DD
V+3V _DD
V+6.5V
V+3V _STB
V+16.5V
R1
R8
RLS
R7
FAN_12V
R9
CN5701
RGB H/V
IC5701 PD6435A
IC5801 PD6435A
IC7004 PE5362A
IC7101 PD5855A
R10
CN7101
CN5001
D15
TXD_MD
RXD_MD
R2
CN6401
IC6483 SELECTOR
IC6001 A/D PLL
IC6401 LPF
G ON SYNC
R13
CN6402
C SYNC
IC6694 SYNC SEP
IC6607 SELECTOR
DRIVER
IC7207 MAIN UCOM
R3
CN7406
IC6601 SELECTOR LPF
IC6602 A/D PLL
H/V
R12
CN7405
IC6603 SELECTOR
IC6604 SYNC SEP
R11
CN7410
R4
CN7407
IC7201 IC7204 SELECTOR
RGB ASSY

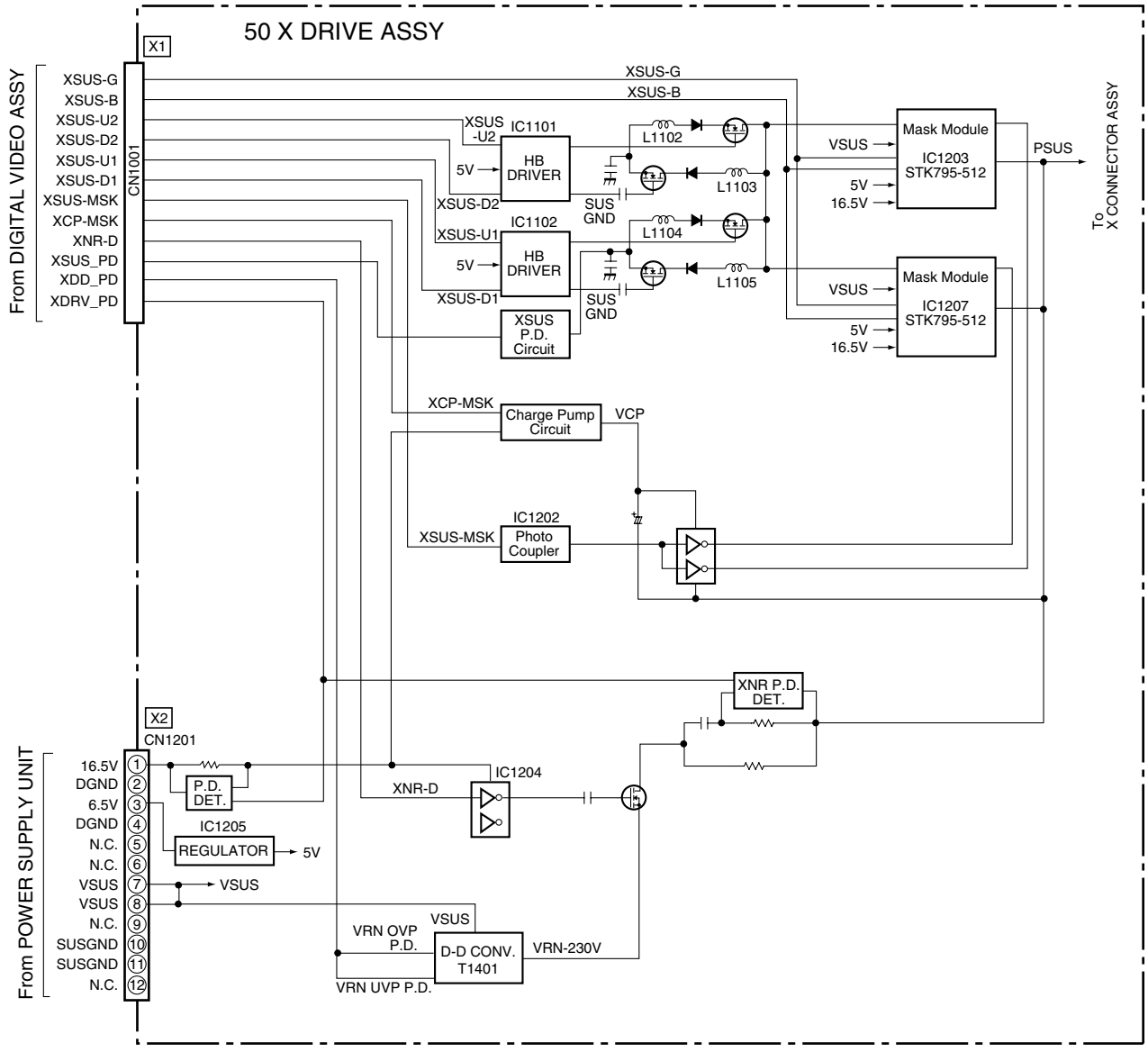
3.1.3 SIGNAL ROUTE



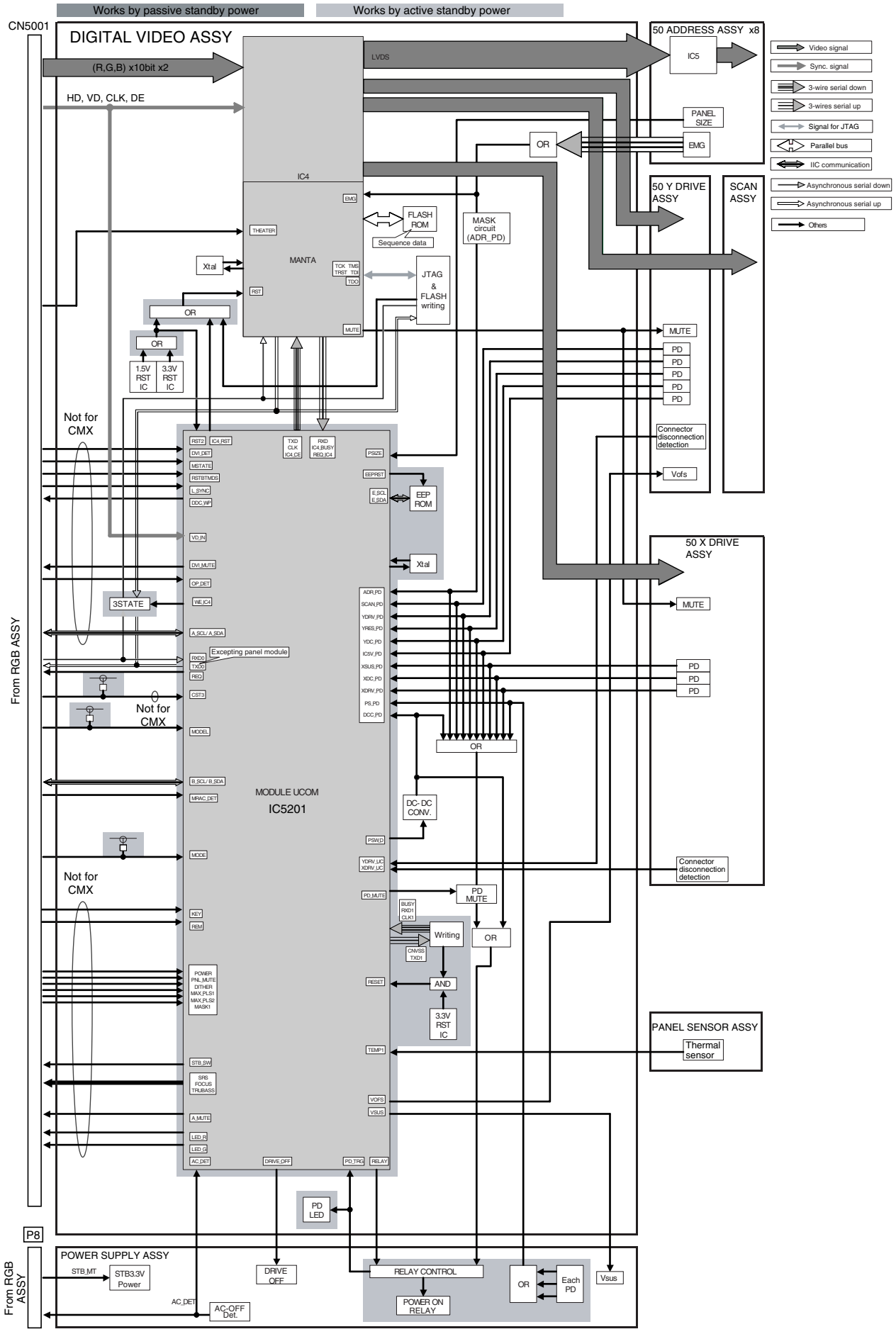
3.1.4 50 Y DRIVE ASSY



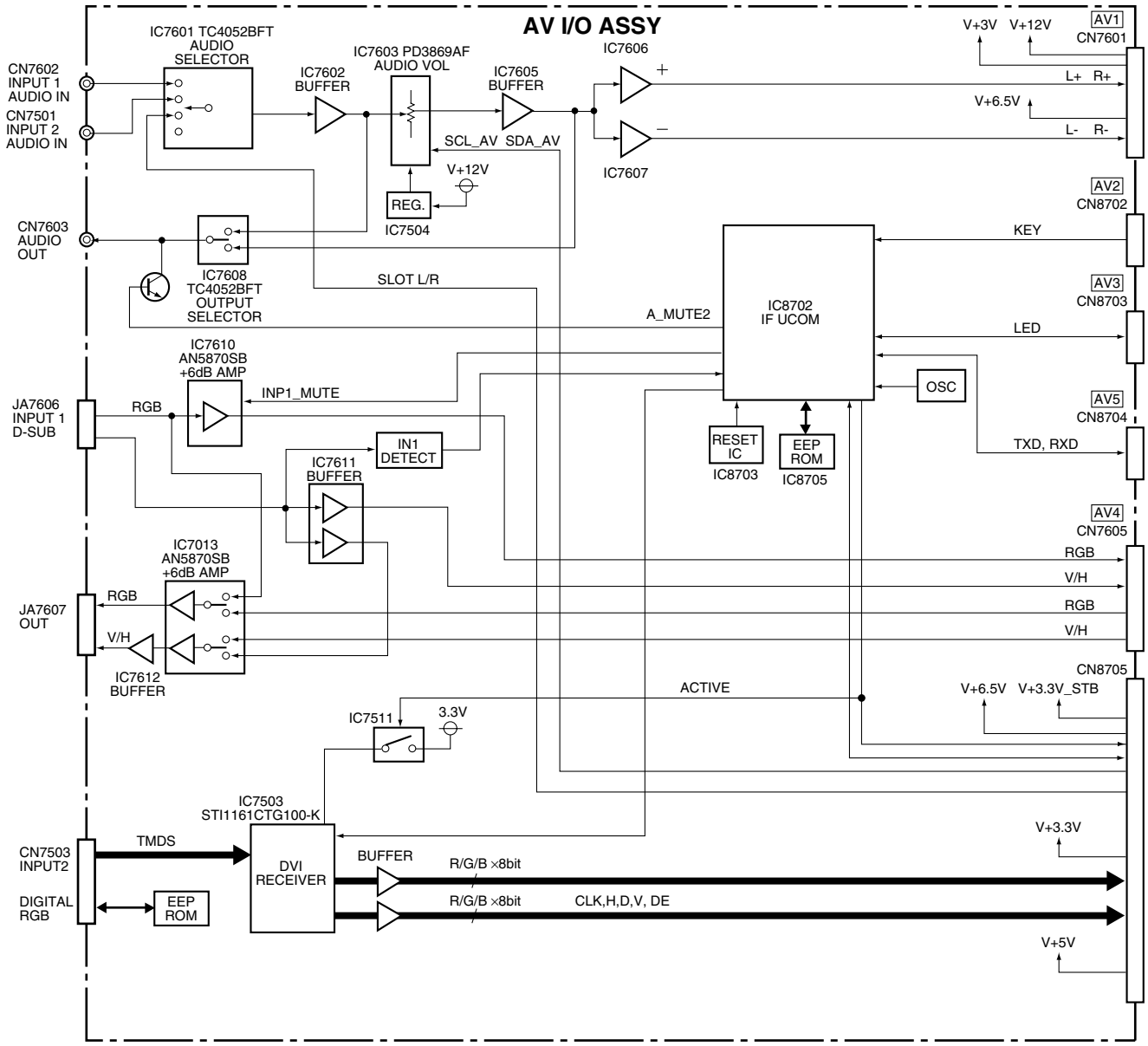
3.1.5 50 X DRIVE ASSY



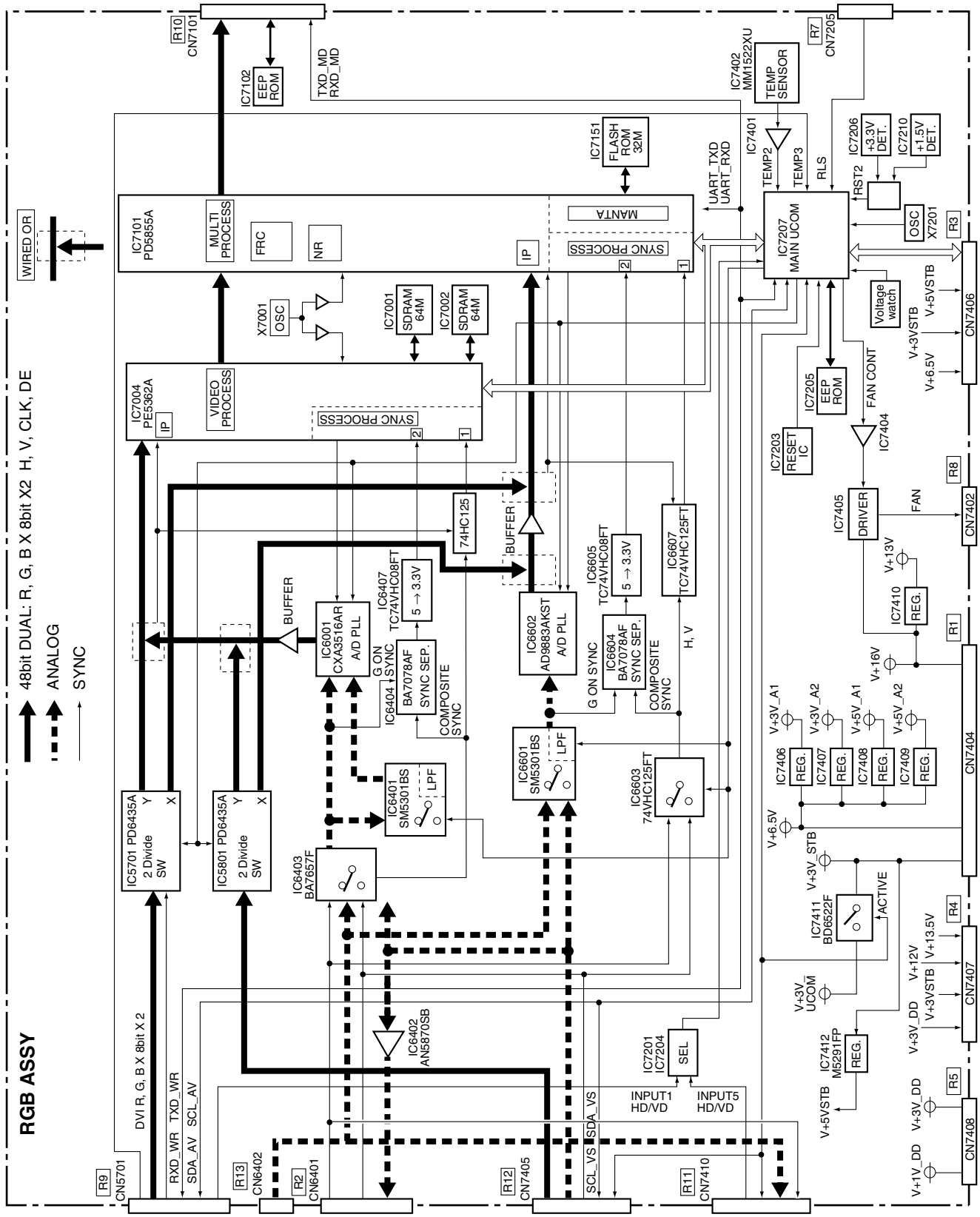
3.1.6 DIGITAL VIDEO ASSY



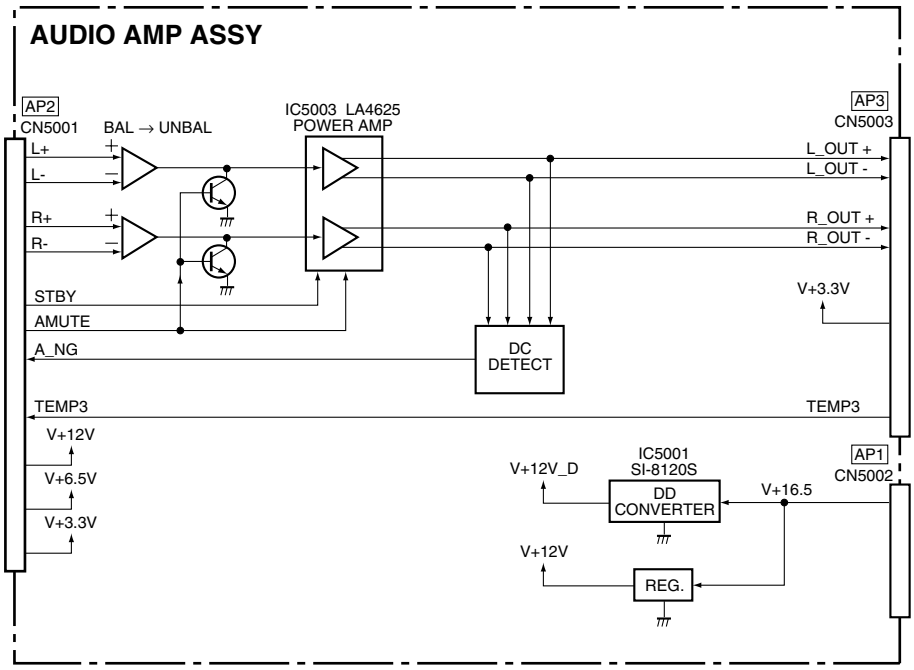
3.1.7 AV I/O ASSY

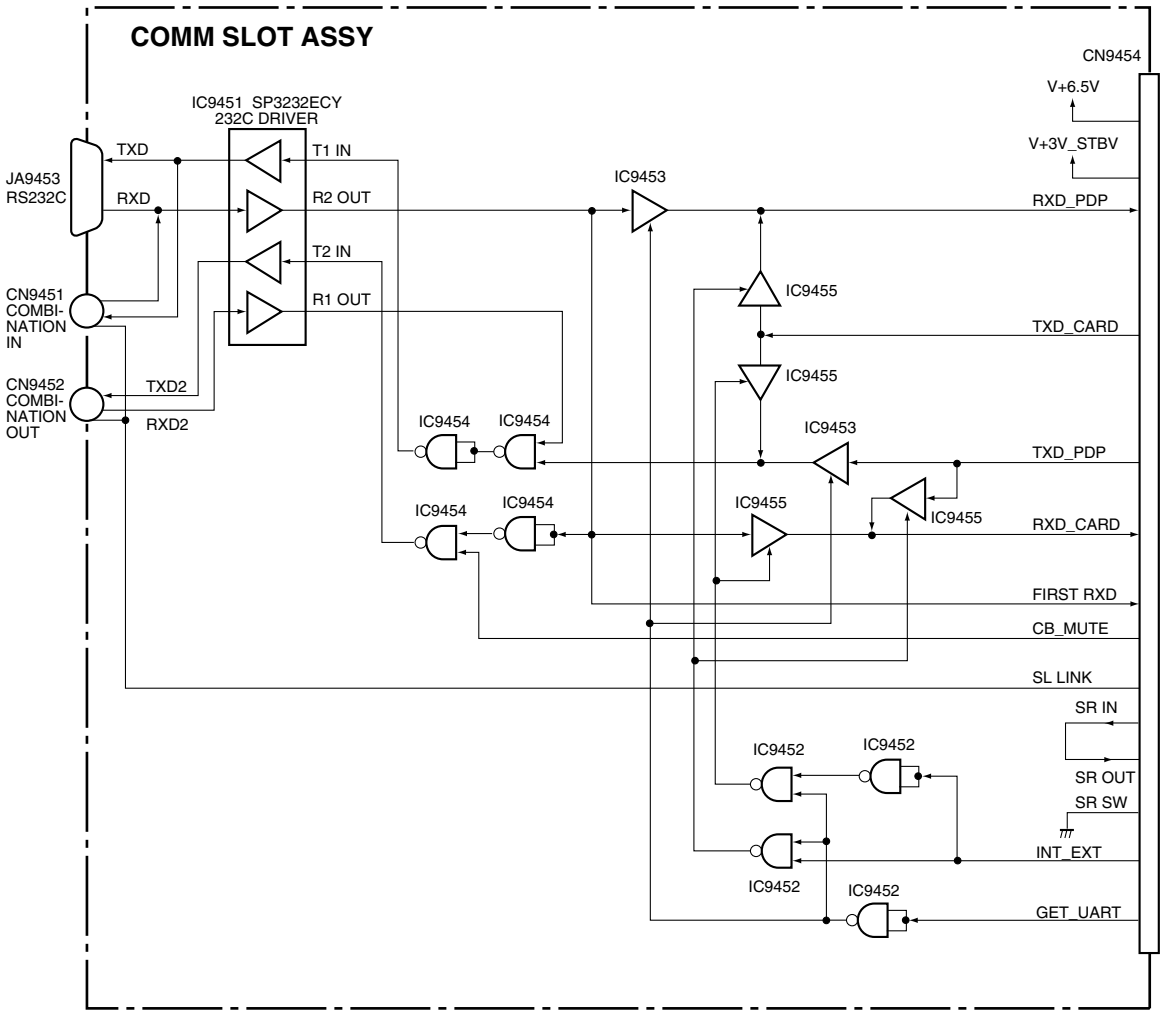


3.1.8 RGB ASSY

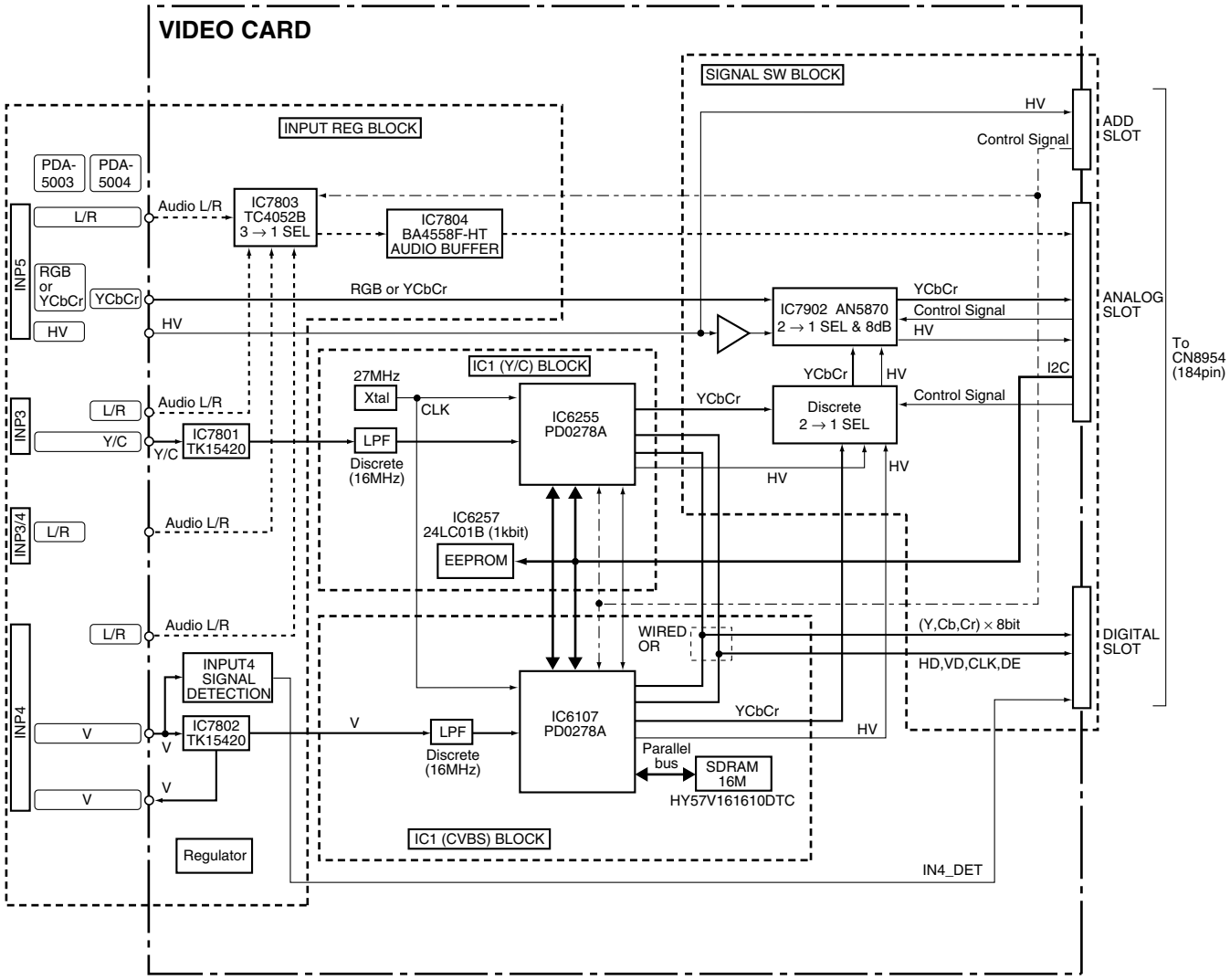

RGB ASSY
48bit DUAL: R, G, B X 8bit X2 H, V, CLK, DE
ANALOG
SYNC
WIRED-OR
DVI R, G, B X 8bit X 2
RXD_WR TXD_WR
SDA_AV SCL_AV
R9 CN5701
R13 CN6402
R2 CN6401
R12 CN7405
R11 CN7410
SCL_VS SDA_VS
INPUT1 HD/VD
INPUT5 HD/VD
IC7201 IC7204 SEL
IC6402 AN5870SB
IC5701 PD6435A 2 Divide SW
IC5801 PD6435A 2 Divide SW
IC6403 BA7657F
IC6401 SM5301BS LPF
IC6001 CXA3516AR A/D PLL
IC6407 TC74VHC08FT 5 → 3.3V
IC6404 BA7078AF SYNC SEP.
G ON +SYNC
COMPOSITE SYNC
BUFFER
74HC125
IC6602 AD9883AKST A/D PLL
IC6605 TC74VHC08FT 5 → 3.3V
IC6604 BA7078AF SYNC SEP.
G ON SYNC
COMPOSITE SYNC
IC6607 TC74VHC125FT
H, V
IC6601 SM5301BS LPF
IC6603 74VHC125FT
IC7101 PD5855A
MULTI PROCESS
FRC
NR
MANTA
SYNC PROCESS
IP
IC7004 PE5362A
VIDEO PROCESS
X7001 OSC
IC7001 SDRAM 64M
IC7002 SDRAM 64M
R10 CN7101
IC7102 EEP ROM
TXD_MD RXD_MD
IC7151 FLASH ROM 32M
IC7207 MAIN UCOM
UART_TXD UART_RXD
IC7402 MM1522XU TEMP SENSOR
TEMP2
TEMP3
RLS
IC7401
IC7206 +3.3V DET.
IC7210 +1.5V DET.
RST2
OSC X7201
R7 CN7205
R3
CN7406
Voltage watch
V+5VSTB
V+3VSTB
V+6.5V
IC7205 EEP ROM
FAN CONT
IC7404
IC7203 RESET IC
IC7405 DRIVER
FAN
R8
CN7402
V+13V
IC7410 REG.
R1
V+16V
CN7404
V+3V_A1
V+3V_A2
V+5V_A1
V+5V_A2
IC7406 REG.
IC7407 REG.
IC7408 REG.
IC7409 REG.
V+6.5V
V+3V_STB
IC7411 BD6522F
ACTIVE
R4
CN7407
V+13.5V
V+12V
V+3V_DD
V+3V UCOM
IC7412 M52291FP REG.
V+5VSTB
R5
CN7408
V+3V_DD
V+1V_DD

3.1.9 AUDIO AMP and COMM SLOT ASSYS





3.1.10 VIDEO CARD

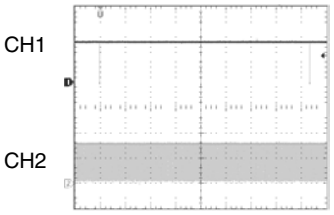


3.2 WAVEFORMS

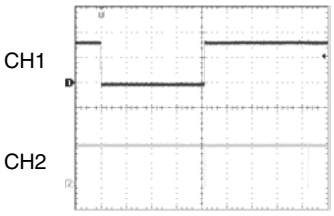
DIGITAL VIDEO ASSY (4/6)

• DIGITAL I/F BLOCK

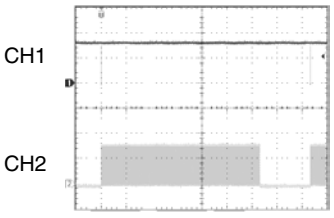
① CH1: K5003 (VD)
CH2: K5002 (HD)
V: 2V/div. H: 2msec/div.



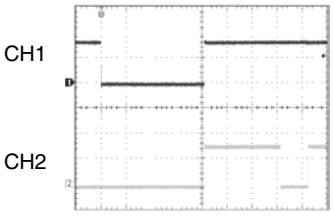
① CH1: K5003 (VD)
CH2: K5002 (HD)
V: 2V/div. H: 4μsec/div.



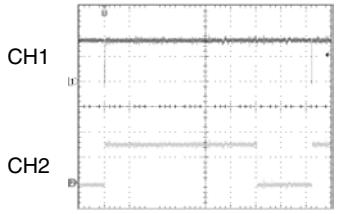
② CH1: K5003 (VD)
CH2: K5004 (DE)
V: 2V/div. H: 2msec/div.



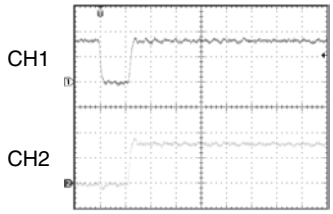
② CH1: K5003 (VD)
CH2: K5004 (DE)
V: 2V/div. H: 4μsec/div.



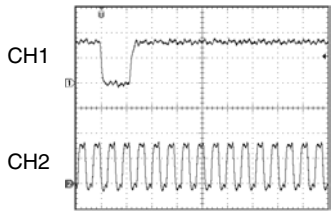
③ CH1: K5002 (HD)
CH2: K5004 (DE)
V: 2V/div. H: 2μsec/div.



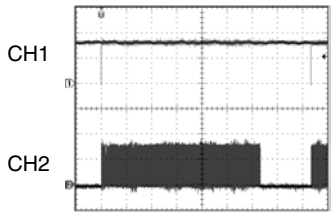
③ CH1: K5002 (HD)
CH2: K5004 (DE)
V: 2V/div. H: 40nsec/div.



④ CH1: K5002 (HD)
CH2: CN5001-pin 77 (DCLK)
V: 2V/div. H: 40nsec/div.



⑤ CH1: K5003 (VD)
CH2: CN5001-pin 88 (RA_IN2)
V: 2V/div. H: 2msec/div.

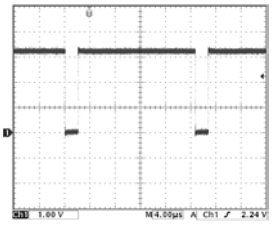


RGB ASSY (2/10, 3/10, 4/10)

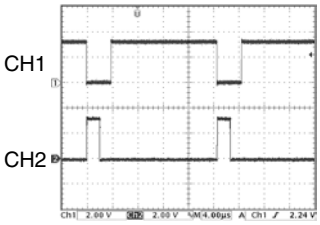
MAUN AD BLOCK, MAIN LPF BLOCK, SUS LPF&AD BLOCK

Input: INPUT 1
Signal: RGB, XGA 60 Hz, Color-bar
⑫ to ㉑, ㉔ : With two screens, a SUB screen chooses INPUT1 and observes it.

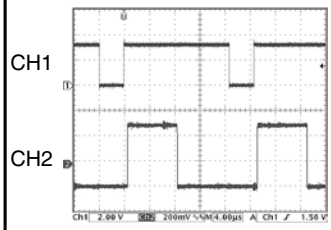
④ K6404 (HD1_MAIN)
V: 1V/div. H: 4μsec/div.



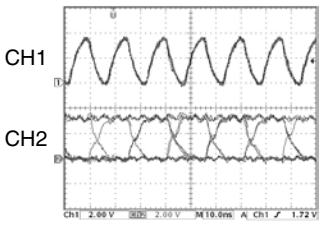
⑪ CH1: IK6012 (PLLHD_MAIN)
V: 2V/div. H: 4μsec/div.
⑨ CH2: K6013 (CLAMP_MAIN)
V: 2V/div. H: 4μsec/div.



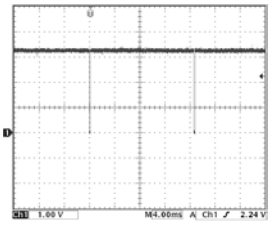
㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4μsec/div.
⑮ CH2: Foot of C6614 (GAIN)
V: 200mV/div. H: 4μsec/div.



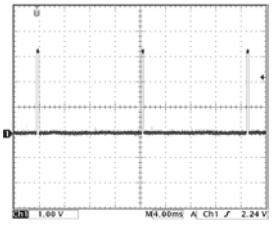
⑲ CH1: Foot of R6628 (DATACK)
V: 2V/div. H:10nsec/div.
㉑ CH2: Foot of R6644 (RED0)
V: 2V/div. H: 10nsec/div.



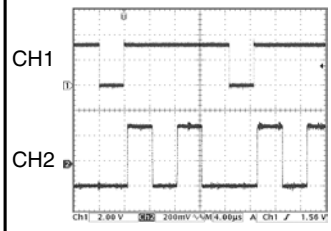
⑤ K6403 (VD1_MAIN)
V: 1V/div. H: 4msec/div.



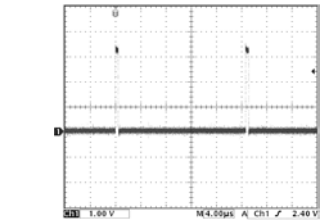
⑩ K6011 (PLLHOLD_MAIN)
V: 1V/div. H: 4msec/div.



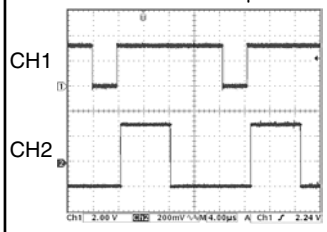
㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4μsec/div.
⑯ CH2: Foot of C6623 (RAIN)
V: 200mV/div. H: 4μsec/div.



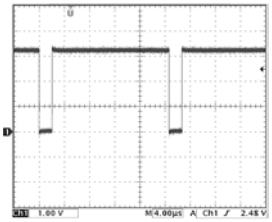
⑳ Foot of R6637 (HSOUT)
V: 1V/div. H: 4μsec/div.



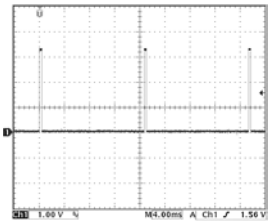
⑪ CH1: K6012 (PLLHD_MAIN)
V: 2V/div. H: 4μsec/div.
⑥ CH2: K6001 (G)
V: 200mV/div. H: 4μsec/div.



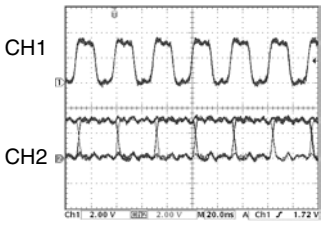
⑫ K6605 (HD1_SUB)
V: 1V/div. H: 4μsec/div.



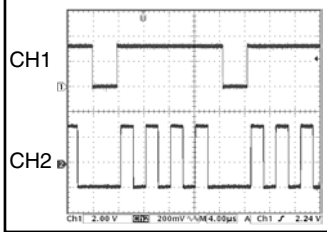
⑰ K6602 (PLL HOLD_SUB)
V: 1V/div. H: 4msec/div.



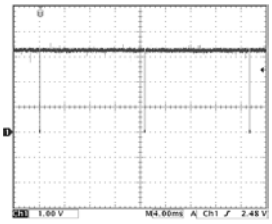
㉒ CH1: IC6008-pin2 (CLK)
V: 2V/div. H:20nsec/div.
㉓ CH2: IC6006-pin 9 (RB0)
V: 2V/div. H: 20nsec/div.



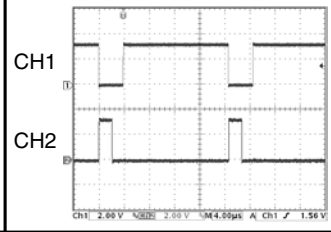
⑪ CH1: K6012 (PLLHD_MAIN)
V: 2V/div. H: 4μsec/div.
⑦ CH2: K6002 (B)
V: 200mV/div. H: 4μsec/div.



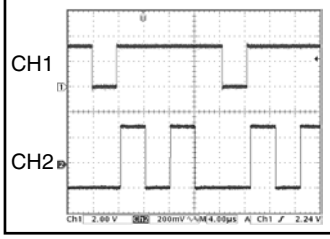
⑬ K6604 (VD1_SUB)
V: 1V/div. H: 4msec/div.



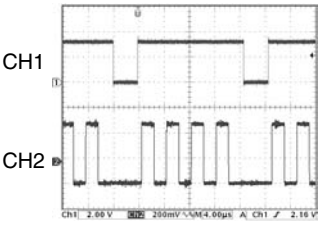
㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4μsec/div.
⑱ CH2: K6603 (CLAMP)
V: 2V/div. H: 4μsec/div.



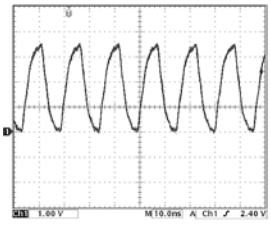
⑪ CH1: K6012 (PLLHD_MAIN)
V: 2V/div. H: 4μsec/div.
⑧ CH2: K6003 (R)
V: 200mV/div. H: 4μsec/div.



㉔ CH1: K6601(PLLHD_SUB)
V: 2V/div. H: 4μsec/div.
⑭ CH2: Foot of C6609 (BAIN)
V: 200mV/div. H: 4μsec/div.



⑲ Foot of R6628 (DATACK)
V: 1V/div. H: 10nsec/div.

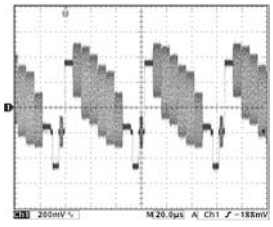


VIDEO SLOT1 ASSY (1/4), VIDEO SLOT2 ASSY (1/4)

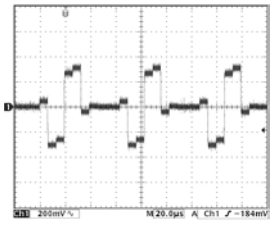
• IC1(CVBS) BLOCK

Input: INPUT 4
Signal: NTSC 525i, Color-bar

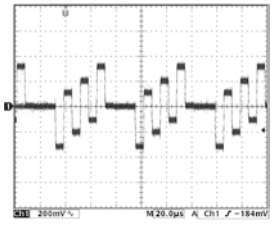
① IC6107-pin 51 (CVBS IN)
V: 200mV/div. H: 20µsec/div.



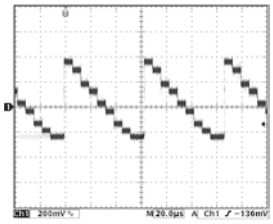
② IC6107-pin 65 (Cr)
V: 200mV/div. H: 20µsec/div.



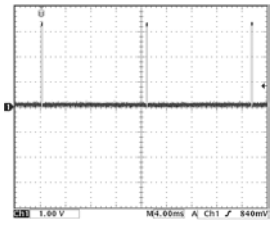
③ IC6107-pin 72 (Cb)
V: 200mV/div. H: 20µsec/div.



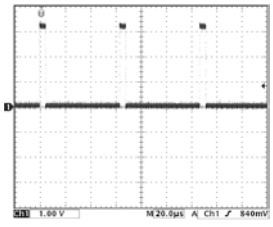
④ IC6107-pin 67 (Y)
V: 200mV/div. H: 20µsec/div.



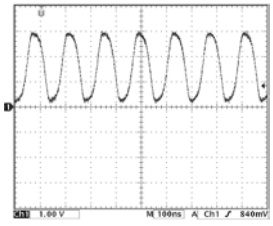
⑤ IC6107-pin 107 (VD_IC1V)
V: 1V/div. H: 4msec/div.



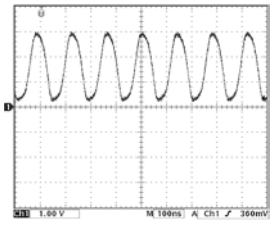
⑥ IC6107-pin 108 (HD_IC1V)
V: 1V/div. H: 20µsec/div.



⑦ IC6107-pin 87 (PLSINI1)
V: 1V/div. H: 100msec/div.



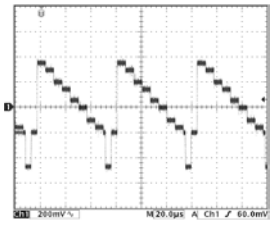
⑧ IC6107-pin 90 (PLSINI2)
V: 1V/div. H: 100msec/div.



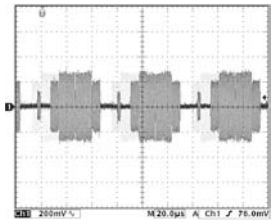
VIDEO SLOT1 ASSY(2/4)
• IC1(Y/C) Block

Input: INPUT 3
Signal: Y/C NTSC 525i, Color-bar

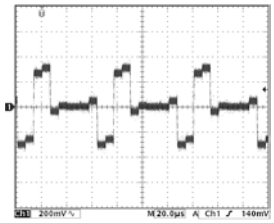
⑨ Q6257 (2/2)-Emitter (YIN)
V: 200mV/div. H: 20µsec/div.



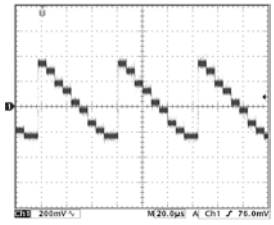
⑩ Q6256 (2/2)-Emitter (CIN)
V: 200mV/div. H: 20µsec/div.



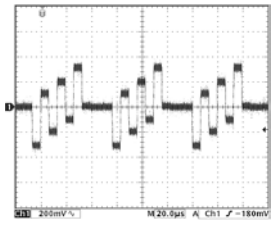
⑪ IC6255-pin 65 (Cr)
V: 200mV/div. H: 20µsec/div.



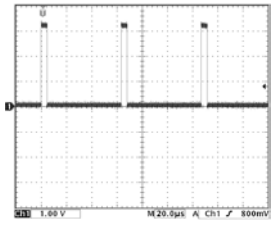
⑫ IC6255-pin 67 (Y)
V: 200mV/div. H: 20µsec/div.



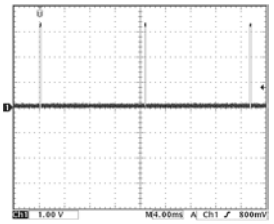
⑬ IC6255-pin 72 (Cb)
V: 200mV/div. H: 20µsec/div.



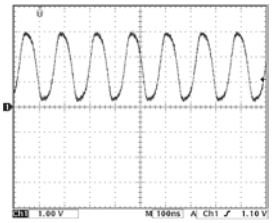
⑭ IC6255-pin 108 (HD_IC1S)
V: 1V/div. H: 20µsec/div.



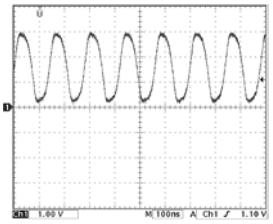
⑮ IC6255-pin 107 (VD_IC1S)
V: 1V/div. H: 4msec/div.



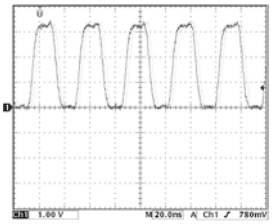
⑯ IC6255-pin 90 (PLSINI2)
V: 1V/div. H: 100nsec/div.



⑰ IC6255-pin 87 (PLSINI1)
V: 1V/div. H: 100nsec/div.



⑱ Foot of R6294 (SYSCLK)
V: 1V/div. H: 20nsec/div.



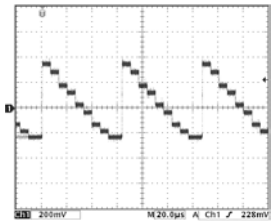
VIDEO SLOT1 ASSY (4/4)
VIDEO SLOT2 ASSY (4/4)
• SIGNAL SW BLOCK

AV I/O ASSY (1/3)
• VIDEO **• AV/IO BLOCK** • AUDIO

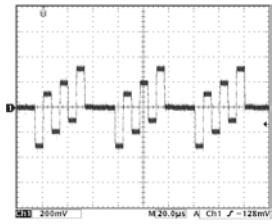
Input: INPUT 1
Signal: RGB, XGA 60 Hz, Color-bar

Input: INPUT 1
Signal: 200mVrms, 1 kHz input, VOL MAX

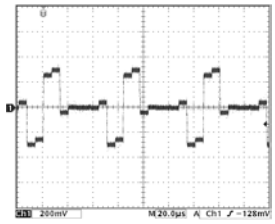
⑲ (-) side of C7908 (G/Y)
V: 200mV/div. H: 20µsec/div.



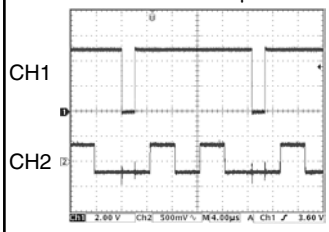
⑳ (-) side of C7912 (B/Cb)
V: 200mV/div. H: 20µsec/div.



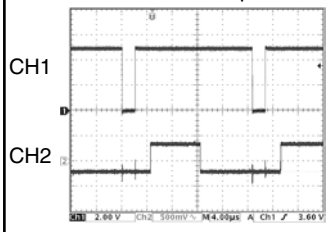
㉑ (-) side of C7917 (R/Cr)
V: 200mV/div. H: 20µsec/div.



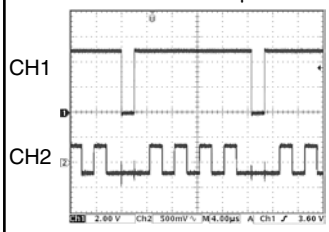
④ CH1: CN7605-pin 10(HD_IO)
V: 2V/div. H: 4µsec/div.
① CH2: CN7605-pin 16 (R_IO)
V: 500mV/div. H: 4µsec/div.



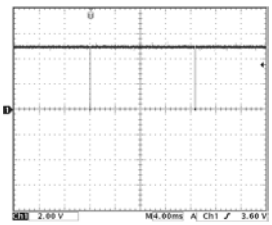
④ CH1: CN7605-pin 10(HD_IO)
V: 2V/div. H: 4µsec/div.
② CH2: CN7605-pin 14 (G_IO)
V: 500mV/div. H: 4µsec/div.



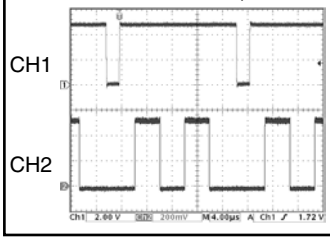
④ CH1: CN7605-pin 10(HD_IO)
V: 2V/div. H: 4µsec/div.
③ CH2: CN7605-pin 12 (B_IO)
V: 500mV/div. H: 4µsec/div.



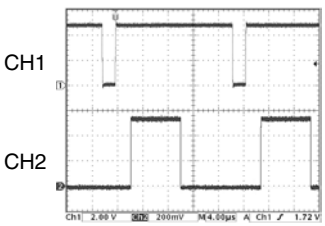
⑤ CN7605-pin 9 (VD_IO)
V: 2V/div. H: 4msec/div.



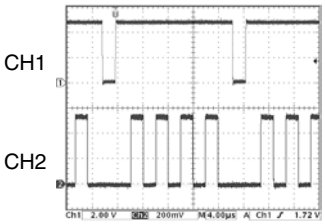
⑩ CH1: JA7606-pin 13 (HD)
V: 2V/div. H: 4µsec/div.
⑥ CH2: JA7606-pin 1 (R)
V: 200mV/div. H: 4µsec/div.



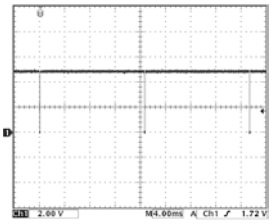
⑩ CH1: JA7606-pin 13 (HD)
V: 2V/div. H: 4µsec/div.
⑦ CH2: JA7606-pin 2 (G)
V: 200mV/div. H: 4µsec/div.



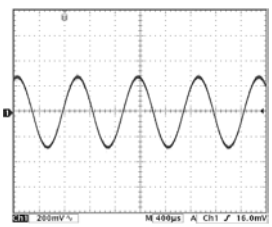
⑩ CH1: JA7606-pin 13 (HD)
V: 2V/div. H: 4µsec/div.
⑧ CH2: JA7606-pin 3 (B)
V: 200mV/div. H: 4µsec/div.



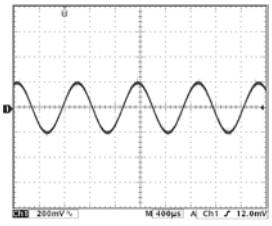
⑨ JA7606-pin 14 (VD)
V: 2V/div. H: 4msec/div.



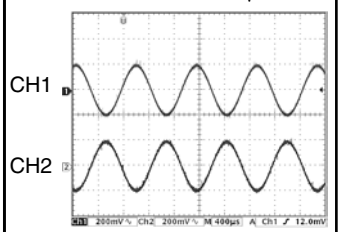
⑪ IC7601-pin 12 (L_AUDIO)
V: 200mV/div. H: 400µsec/div.



⑫ IC7603-pin 14 (L_AUDIO)
V: 200mV/div. H: 400µsec/div.

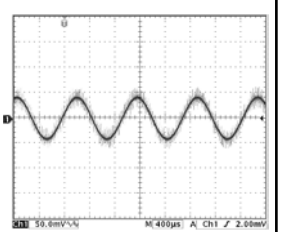


⑬ CH1: CN7601-pin 14 (+L_OUT)
V: 200mV/div. H: 400µsec/div.
⑭ CH2: CN7601-pin 13 (-L_OUT)
V: 200mV/div. H: 400µsec/div.

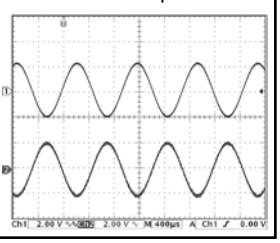


AUDIO AMP ASSY
• AUDIO
Input: INPUT 1
Signal: 200mVrms, 1 kHz input, VOL MAX

⑮ IC5003-pin 1 (L_AUDIO)
V: 50mV/div. H: 400µsec/div.



⑯ CH1: CN5003-pin 9 (L-)
V: 2V/div. H: 400µsec/div.
⑰ CH2: CN5003-pin 8 (L+)
V: 2V/div. H: 400µsec/div.



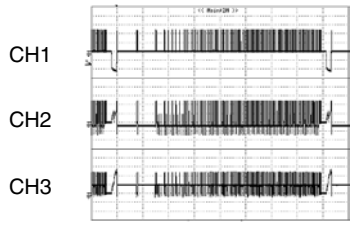
50 X DRIVE ASSY, 50 Y DRIVE ASSY and 50 SCAN A ASSY

• 50 X SUS BLOCK, 50 Y LOGIC BLOCK, 50 Y SUS BLOCK

① Drive Output Waveform (1 field,color-bar)

CH1: R1226 (XPSUS) - K1201 (SUSGND) (50 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND) (50 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND) (50 SCAN A ASSY)

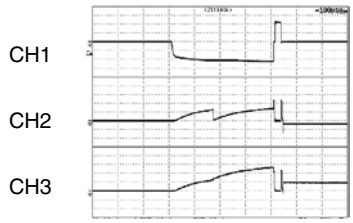
V: 100V/div. H: 2msec/div.



② Reset Pulse

CH1: R1226 (XPSUS) - K1201 (SUSGND) (50 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND) (50 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND) (50 SCAN A ASSY)

V: 100V/div. H: 100µsec/div.



③ Sustain Pulse (1 sub-sub-field)

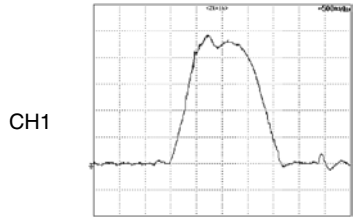
CH1: R1226 (XPSUS) - K1201 (SUSGND) (50 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND) (50 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND) (50 SCAN A ASSY)

V: 50V/div. H: 5µsec/div.

④ Sustain Waveform

CH1: R2348 (YPSUS) - K2301 (SUSGND) (50 Y DRIVE ASSY)

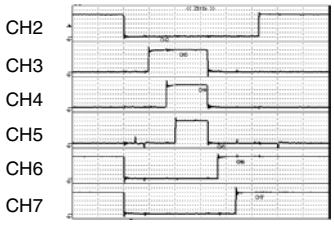
V: 50V/div. H: 500nsec/div.



⑤ Control Signal (Sustain Waveform Gen.)

CH2: K2016 (YSUS-G) - K2010 (DGND)
CH3: K2025 (YSUS-U1) - K2010 (DGND)
CH4: K2022 (YSUS-U2) - K2010 (DGND)
CH5: K2026 (YSUS-B) - K2010 (DGND)
CH6: K2024 (YSUS-D2) - K2010 (DGND)
CH7: K2027 (YSUS-D1) - K2010 (DGND) (50 Y DRIVE ASSY)

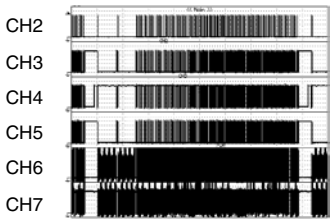
V: 1V/div. H: 500nsec/div.



⑥ Scan Control Signal (1 field, color-bar)

CH2: K2006 (SI) - K2029 (DGND)
CH3: K2009 (OC1) - K2029 (DGND)
CH4: K2004 (OC2) - K2029 (DGND)
CH5: K2007 (CLR) - K2029 (DGND)
CH6: K2003 (CLK2) - K2029 (DGND)
CH7: K2008 (LE) - K2029 (DGND) (50 Y DRIVE ASSY)

V: 1V/div. H: 2msec/div.



⑦ X Drive Pulse Control Signal (color-bar)

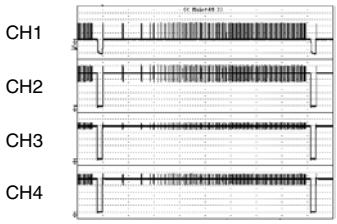
CH1: R1226 (XPSUS) - K2301 (SUSGND)

V: 100V/div. H: 2msec/div.

CH2: K1016 (XCP-MSK) - K1020 (DGND)
CH3: K1015 (XSUS-MSK) - K1020 (DGND)
CH4: K1014 (XNR-D) - K1020 (DGND)

V: 1V/div. H: 2msec/div.

(50 X DRIVE ASSY)



⑧ Y Drive Pulse Control Signal (color-bar)

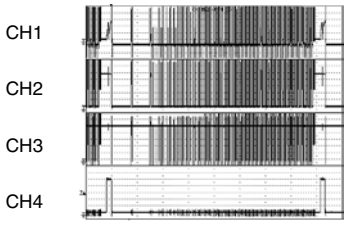
CH1: R2348 (YPSUS) - K2301 (SUSGND)

V: 50V/div. H: 2msec/div.

CH2: K2015 (YSUS-MSK) - K2010 (DGND)
CH3: K2017 (YSOFT-D) - K2010 (DGND)
CH4: K2023 (YPR-U) - K2010 (DGND)

V: 1V/div. H: 2msec/div.

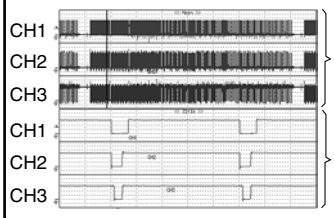
(50 Y DRIVE ASSY)



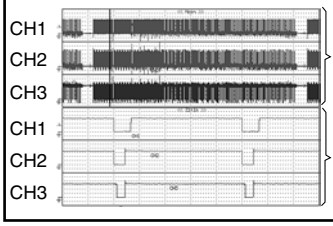
50 ADDRESS ASSY

• ADR RESONANCE BLOCK (VIDEO)

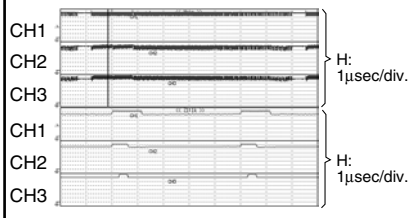
① CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1603-pin 4 (ADR_U1)
CH3: IC1603-pin 2 (ADR_D1)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



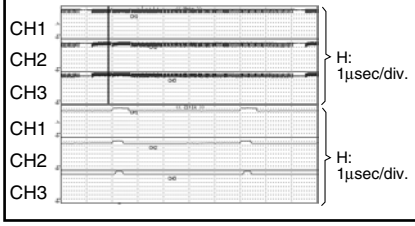
② CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1602-pin 4 (ADR_U2)
CH3: IC1602-pin 2 (ADR_D2)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



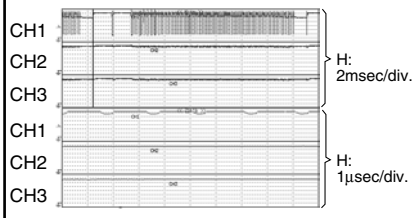
③ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1603-pin 4 (ADR_U1)
CH3: Q1603-pin 2 (ADR_D1)
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)



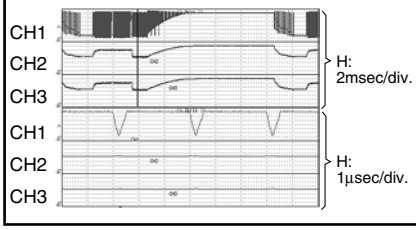
④ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1602-pin 4 (ADR_U2)
CH3: Q1602-pin 2 (ADR_D2)
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)



⑤ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)



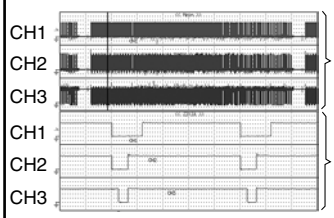
⑥ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: VIDEO, Signal: B/W(1×8))



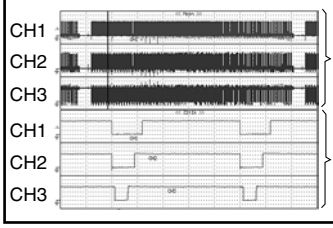
50 ADDRESS ASSY

• ADR RESONANCE BLOCK (PC)

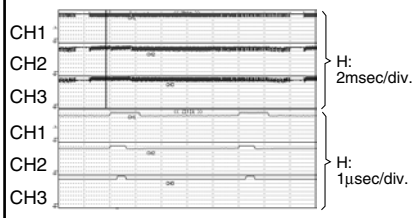
① CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1603-pin 4 (ADR_U1)
CH3: IC1603-pin 2 (ADR_D1)
V: 1V/div.
(Input: PC, Signal: Color-bar)



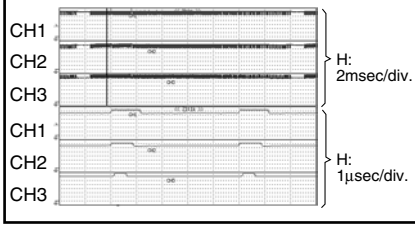
② CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1602-pin 4 (ADR_U2)
CH3: IC1602-pin 2 (ADR_D2)
V: 1V/div.
(Input: PC, Signal: Color-bar)



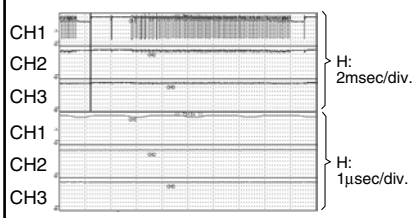
③ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1603-pin 4 (ADR_U1)
CH3: Q1603-pin 2 (ADR_D1)
V: 10V/div.
(Input: PC, Signal: Color-bar)



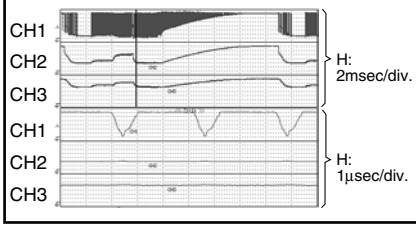
④ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1602-pin 4 (ADR_U2)
CH3: Q1602-pin 2 (ADR_D2)
V: 10V/div.
(Input: PC, Signal: Color-bar)



⑤ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: PC, Signal: Color-bar)

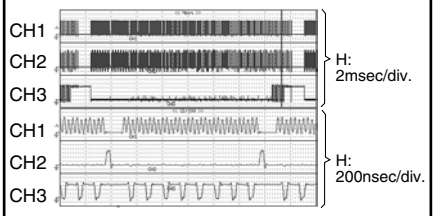


⑥ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: PC, Signal: B/W(1×8))

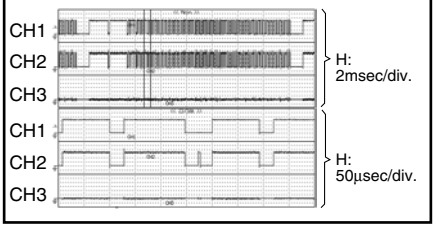


50 ADDRESS ASSY
• ADR LOGIC BLOCK

① CH1: IC1553-pin 18 (CLK input)
CH2: IC1553-pin 16 (LE input)
CH3: IC1553-pin 9 (DATA input)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



② CH1: IC1553-pin 23 (HBLK input)
CH2: IC1553-pin 19 (LBLK input)
CH3: IC1553-pin 25 (HZ input)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



3.3 VOLTAGES

• Voltages

CN5601 (D1)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	+12V	I	+12V power input	+12VDC
2	+12V	I	+12V power input	+12VDC
3	GND_D	–	GND	
4	GND_D	–	GND	
5	PD	O	Power down signal	0VDC
6	VSUS_ADJ	O	VSUS adjustment signal	
7	PS_PD	I	Power-down detecting signal of POWER SUPPLY block	0VDC
8	RELAY	O	Relay control signal	+3.3VDC
9	DRF	O	Drive control signal	0VDC
10	AC_DET	I	Primary side power (AC) state output at panel side	+3.0VDC
11	PD_TRIGGER	I	Power down trigger	+3.3VDC

CN5602 (D2)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	VADR	I	Address drive power (+61V) input	+61VDC
2	VADR	I	Address drive power (+61V) input	+61VDC
3	N.C		Not connected	
4	GND_ADR	–	GND	
5	GND_ADR	–	GND	
6	+6.5V	I	+6.5V power input	+6.8VDC
7	GND_D	–	GND	

RGB ASSY — POWER SUPPLY ASSY

R1 (CN7404)		Voltage (V)	P8	
No.	Name		Name	No.
1	V+16.5V	16.7	V+16.5V	1
2	GND	0	GND	2
3	V+12V	12.9	V+12V	3
4	V+12V	12.9	V+12V	4
5	GND	0	GND	5
6	GND	0	GND	6
7	V+6.5V	6.8	V+6.5V	7
8	V+6.5V	6.8	V+6.5V	8
9	GND	0	GND	9
10	GND	0	GND	10
11	V+3V_STB	3.3	V+3V_STB	11
12	GND	0	GND	12
13	AC_DET	3.3	AC_DET	13

RGB ASSY — AV I/O ASSY

R2 (CN6401)		Voltage (V)	AV4 (CN8705)	
No.	Name		Name	No.
1	VD_SLOT	0	VD_SLOT	1
2	HD_SLOT	0	HD_SLOT	2
3	GNDD	0	GNDD	3
4	B_SLOT	0	B_SLOT	4
5	GNDD	0	GNDD	5
6	G_SLOT	0	G_SLOT	6
7	GNDD	0	GNDD	7
8	R_ SLOT	0	R_ SLOT	8
9	VD_ IO	5	VD_ IO	9
10	HD_ IO	4.5	HD_ IO	10
	R13 (CN6402)			
1	GNDD	0	GNDD	11
2	B_ IO	0	B_ IO	12
3	GNDD	0	GNDD	13
4	G_ IO	0	G_ IO	14
5	GNDD	0	GNDD	15
6	R_ IO	0	R_ IO	16

RGB ASSY — COMM SLOT I/F ASSY

R3 (CN7406)		Voltage (V)	CS2 (CN8902)	
No.	Name		Name	No.
1	V+5V_STB	5.1	V+5V_STB	1
2	GND	0	GND	2
3	V+3V_STB	3.3	V+3V_STB	3
4	CYOBI1	3.3	CYOBI1	4
5	CYOBI2	0	CYOBI2	5
6	CYOBI3	0	CYOBI3	6
7	GND	0	GND	7
8	SR_OUT	4.9	SR_OUT	8
9	SLOT_ST_COM	3.3	SLOT_ST_COM	9
10	V+6V	6.8	V+6V	10
11	NC	0	NC	11

RGB ASSY — VIDEO SLOT I/F ASSY

R4 (CN7407)		Voltage (V)	VS1 (CN8951)	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	V+13V	13.6	V+13V	3
4	V+13V	13.6	V+13V	4
5	V+12V	12.9	V+12V	5
6	V+12V	12.9	V+12V	6
7	GND	0	GND	7
8	V+3V_STB	3.3	V+3V_STB	8
9	GND	0	GND	9
10	V+3V_DD	3.3	V+3V_DD	10
11	V+3V_DD	3.3	V+3V_DD	11
12	GND	0	GND	12

RGB ASSY — DIGITAL VIDEO ASSY

R5 (CN7408)		Voltage (V)	D3 (CN5002)	
No.	Name		Name	No.
1	V+1V_DD	1.4	V+1V_DD	1
2	V+1V_DD	1.4	V+1V_DD	2
3	V+1V_DD	1.4	V+1V_DD	3
4	GND	0	GND	4
5	GND	0	GND	5
6	GND	0	GND	6
7	V+3V_DD	3.3	V+3V_DD	7
8	V+3V_DD	3.3	V+3V_DD	8
9	GND	0	GND	9
10	GND	0	GND	10
11	NC			
12	NC			

RGB ASSY — LED OPT ASSY (OPT)

R7 (CN7205)		Voltage (V)	LO2 (CN9051)	
No.	Name		Name	No.
1	3.3V	3.3	3.3V	1
2	RLS	0-3.3	RLS	2
3	GND	0	GND	3
4	GND	0	GND	4

RGB ASSY — FAN (L), (R)

R8 (CN7402)		Voltage (V)	FAN (L)	
No.	Name		Name	No.
1	FAN_12V	0	FAN_12V	1
2	FAN_NG	3.2	FAN_NG	2
3	GND	0	GND	3
			FAN (R)	
4	FAN_12V	0	FAN_12V	1
5	FAN_NG	3.2	FAN_NG	2
6	GND	0	GND	3
7	NC			

RGB ASSY

R9 (CN5701)				
No.	Name			
AV I/O IF ASSY		AV I/O ASSY		
CN2102, AV6 (CN2101)		Voltage (V)	CN8705	
No.	Name		Name	No.
1	N.C.	0	N.C.	101
2	N.C.	0	N.C.	102
3	A_R_SLOT	0	A_R_SLOT	103
4	GND	0	GND	104
5	A_L_SLOT	0	A_L_SLOT	105
6	GND	0	GND	106
7	V+12V	12.9	V+12V	107
8	GND	0	GND	108
9	1N1_HD	4.4	1N1_HD	109
10	1N1_VD	4.8	1N1_VD	110
11	WE_ROM_B	0	WE_ROM_B	111
12	KEY	3.3	KEY	112
13	IO_YOBI2	0	IO_YOBI2	113
14	SR_OUT	5	SR_OUT	114
15	RXD_IF	3.3	RXD_IF	115
16	CLK_IF	3.3	CLK_IF	116
17	RXD_WR	3.3	RXD_WR	117
18	REQ_IF	0	REQ_IF	118
19	RST_IF	0	RST_IF	119
20	IF_CE	3.2	IF_CE	120
21	HOT_P1	0	HOT_P1	121
22	HDMI2_SDA	0	HDMI2_SDA	122
23	HDMI_INT1	3.2	HDMI_INT1	123
24	SCL_AV	3.3	SCL_AV	124
25	HDMI_AUDIO_CLK	0	HDMI_AUDIO_CLK	125
26	D_AUDIO_SEL	0	D_AUDIO_SEL	126
27	CEC2	0	CEC2	127
28	GND	0	GND	128
29	HD_DVI	0	HD_DVI	129
30	DE_DVI	0	DE_DVI	130
31	GND	0	GND	131
32	RB_DVI7	0/3.3	RB_DVI7	132
33	RB_DVI6	0/3.3	RB_DVI6	133
34	RB_DVI4	0/3.3	RB_DVI4	134
35	RB_DVI2	0/3.3	RB_DVI2	135
36	RB_DVI0	0/3.3	RB_DVI0	136
37	GB_DVI6	0/3.3	GB_DVI6	137
38	GB_DVI4	0/3.3	GB_DVI4	138
39	GB_DVI2	0/3.3	GB_DVI2	139
40	GB_DVI0	0/3.3	GB_DVI0	140
41	BB_DVI6	0/3.3	BB_DVI6	141
42	BB_DVI4	0/3.3	BB_DVI4	142
43	BB_DVI2	0/3.3	BB_DVI2	143
44	BB_DVI0	0/3.3	BB_DVI0	144
45	RA_DVI7	0/3.3	RA_DVI7	145
46	RA_DVI5	0/3.3	RA_DVI5	146
47	RA_DVI3	0/3.3	RA_DVI3	147
48	RA_DVI1	0/3.3	RA_DVI1	148
49	GND	0	GND	149
52	GA_DVI7	0/3.3	GA_DVI7	152
53	GA_DVI5	0/3.3	GA_DVI5	153
54	GA_DVI3	0/3.3	GA_DVI3	154
55	GA_DVI1	0/3.3	GA_DVI1	155
56	BA_DVI7	0/3.3	BA_DVI7	156

RGB ASSY

R9 (CN5701)				
No.	Name			
AV I/O IF ASSY			AV I/O ASSY	
CN2102, AV6 (CN2101)		Voltage (V)	CN8705	
No.	Name		Name	No.
57	BA_DVI5	0/3.3	BA_DVI5	157
58	BA_DVI3	0/3.3	BA_DVI3	158
59	GND	0	GND	159
60	V+5V_A2	5	V+5V_A2	160
61	N.C.	0	N.C.	161
62	N.C.	0	N.C.	162
101	N.C.	0	N.C.	1
102	N.C.	0	N.C.	2
103	A_MUTE	0	A_MUTE	3
104	TEMP3	0Å`3.3	TEMP3	4
105	V+6V	6.8	V+6V	5
106	GND	0	GND	6
107	V+3V_A1	3.3	V+3V_A1	7
108	GND	0	GND	8
109	V+3V_UCOM	3.3	V+3V_UCOM	9
110	GND	0	GND	10
111	V+3VSTB	3.3	V+3VSTB	11
112	IO_YOBI1	0	IO_YOBI1	12
113	PN2	0	PN2	13
114	ACTIVE	3.2	ACTIVE	14
115	TXD_IF	3.3	TXD_IF	15
116	TXD_WR	3.3	TXD_WR	16
117	AC_DET	3	AC_DET	17
118	IF_BUSY	0	IF_BUSY	18
119	RESET	3.3	RESET	19
120	HDMI_AUDIO_CE	0	HDMI_AUDIO_CE	20
121	HOT_P2	0	HOT_P2	21
122	HDMI2_SCL	0	HDMI2_SCL	22
123	SDA_AV	3.2	SDA_AV	23
124	HDMI_INT2	3.2	HDMI_INT2	24
125	HDMI_AUDIO_TXD	0	HDMI_AUDIO_TXD	25
126	CEC1	2	CEC1	26
127	RESETX1	3.3	RESETX1	27
128	VD_DVI	0	VD_DVI	28
129	GND	0	GND	29
130	CLK_DVI	0	CLK_DVI	30
131	GND	0	GND	31
132	GND	0	GND	32
133	RB_DVI5	0/3.3	RB_DVI5	33
134	RB_DVI3	0/3.3	RB_DVI3	34
135	RB_DVI1	0/3.3	RB_DVI1	35
136	GB_DVI7	0/3.3	GB_DVI7	36
137	GB_DVI5	0/3.3	GB_DVI5	37
138	GB_DVI3	0/3.3	GB_DVI3	38
139	GB_DVI1	0/3.3	GB_DVI1	39
140	GND	0	GND	40
141	BB_DVI6	0/3.3	BB_DVI6	41
142	BB_DVI4	0/3.3	BB_DVI4	42
143	BB_DVI2	0/3.3	BB_DVI2	43
144	BB_DVI0	0/3.3	BB_DVI0	44
145	RA_DVI6	0/3.3	RA_DVI6	45
146	RA_DVI4	0/3.3	RA_DVI4	46
147	RA_DVI2	0/3.3	RA_DVI2	47
148	RA_DVI0	0/3.3	RA_DVI0	48

RGB ASSY

R9 (CN5701)				
No.	Name			
AV I/O IF ASSY			AV I/O ASSY	
CN2102, AV6 (CN2101)		Voltage (V)	CN8705	
No.	Name		Name	No.
149	GND	0	GND	49
152	GA_DVI6	0/3.3	GA_DVI6	52
153	GA_DVI4	0/3.3	GA_DVI4	53
154	GA_DVI2	0/3.3	GA_DVI2	54
155	GA_DVI0	0/3.3	GA_DVI0	55
156	BA_DVI6	0/3.3	BA_DVI6	56
157	BA_DVI4	0/3.3	BA_DVI4	57
158	BA_DVI2	0/3.3	BA_DVI2	58
159	BA_DVI1	0/3.3	BA_DVI1	59
160	BA_DVI0	0/3.3	BA_DVI0	60
161	NC	0	NC	61
162	NC	0	NC	62

RGB ASSY VIDEO SLOT I/F ASSY

R11 (CN7410)		Voltage (V)	VS3 (CN8955)	
No.	Name		Name	No.
1	GND	0	GND	1
2	KEY	3.3	KEY	2
3	EMGREQ1_V	0	EMGREQ1_V	3
4	EMGREQ2_V	0	EMGREQ2_V	4
5	IC1V_OE	3.3	IC1V_OE	5
6	RESETX1	3.3	RESETX1	6
7	GND	0	GND	7
8	SD_SEL	3.3	SD_SEL	8
9	FNC2	0	FNC2	9
10	FNC3	0	FNC3	10
11	SOUND1	3.3	SOUND1	11
12	GND	0	GND	12
13	DSUBR	3.77	DSUBR	13
14	GND	0	GND	14
15	DSUBG	0	DSUBG	15
16	GND	0	GND	16
17	DSUBB	3.8	DSUBB	17
18	GND	0	GND	18
19	GND	0	GND	19
20	IN5_HD	0	IN5_HD	20
21	GND	0	GND	21
22	SOUSA_X	3.3	SOUSA_X	22
23	VYOBI1	0	VYOBI1	23
24	VYOBI2	0	VYOBI2	24
25	DSUBSW_DET	0	DSUBSW_DET	25
26	GND	0	GND	26
27	GND	0	GND	27
28	GND	0	GND	28
29	EMGREQ1_S	0	EMGREQ1_S	29
30	EMGREQ2_S	0	EMGREQ2_S	30
31	IC1S_OE	0	IC1S_OE	31
32	SLOT_ST3	0.4	SLOT_ST3	32
33	M_CHOICE	0	M_CHOICE	33
34	SOUND2	0	SOUND2	34
35	GND	0	GND	35
36	GND	0	GND	36
37	DSUBH	4.5	DSUBH	37

RGB ASSY VIDEO SLOT I/F ASSY

R11 (CN7410)		Voltage (V)	VS3 (CN8955)	
No.	Name		Name	No.
38	GND	0	GND	38
39	GND	0	GND	39
40	DSUBV	5	DSUBV	40
41	GND	0	GND	41
42	GND	0	GND	42
43	IN5_VD	3.3	IN5_VD	43
44	GND	0	GND	44
45	GND	0	GND	45
46	HYOUJI_X	0	HYOUJI_X	46
47	VYOBI4	0	VYOBI4	47
48	VYOBI5	0	VYOBI5	48
49	VYOBI6	0	VYOBI6	49
50	WE_ROM_B	0	WE_ROM_B	50

RGB ASSY VIDEO SLOT I/F ASSY

R12 (CN7405)		Voltage (V)	VS4 (CN8953)	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	G_SLOT	0	G_SLOT	3
4	GND	0	GND	4
5	B_SLOT	0	B_SLOT	5
6	GND	0	GND	6
7	R_SLOT	0	R_SLOT	7
8	GND	0	GND	8
9	HD_SLOT	0	HD_SLOT	9
10	GND	0	GND	10
11	VD_SLOT	0	VD_SLOT	11
12	GND	0	GND	12
13	AUDIO_L_SLOT	6	AUDIO_L_SLOT	13
14	GND	0	GND	14
15	AUDIO_R_SLOT	6	AUDIO_R_SLOT	15
16	GND	0	GND	16
17	SLOT_ST1	0	SLOT_ST1	17
18	S_DIN_SEL	0	S_DIN_SEL	18
19	FNC_1	0	FNC_1	19
20	FNC_0	5	FNC_0	20
21	NC	0	NC	21
22	NC	0	NC	22
23	VD_DET	0	VD_DET	23
24	GND	0	GND	24
25	HD_DET	0	HD_DET	25
26	GND	0	GND	26
27	VD_IC1	3.2	VD_IC1	27
28	GND	0	GND	28
29	HD_IC1	3	HD_IC1	29
30	GND	0	GND	30
31	GND	0	GND	31
32	RB0_IC1	0/3.3	RB0_IC1	32
33	RB1_IC1	0/3.3	RB1_IC1	33
34	RB2_IC1	0/3.3	RB2_IC1	34
35	RB3_IC1	0/3.3	RB3_IC1	35
36	RB4_IC1	0/3.3	RB4_IC1	36
37	RB5_IC1	0/3.3	RB5_IC1	37

RGB ASSY — VIDEO SLOT I/F ASSY

R12 (CN7405)		Voltage (V)	VS4 (CN8953)	
No.	Name		Name	No.
38	RB6_IC1	0/3.3	RB6_IC1	38
39	RB7_IC1	0/3.3	RB7_IC1	39
40	GND	0	GND	40
41	GND	0	GND	41
42	GB0_IC1	0/3.3	GB0_IC1	42
43	GB1_IC1	0/3.3	GB1_IC1	43
44	GB2_IC1	0/3.3	GB2_IC1	44
45	GB3_IC1	0/3.3	GB3_IC1	45
46	GB4_IC1	0/3.3	GB4_IC1	46
47	GB5_IC1	0/3.3	GB5_IC1	47
48	GB6_IC1	0/3.3	GB6_IC1	48
49	GB7_IC1	0/3.3	GB7_IC1	49
50	GND	0	GND	50
51	GND	0	GND	51
52	BB0_IC1	0/3.3	BB0_IC1	52
53	BB1_IC1	0/3.3	BB1_IC1	53
54	BB2_IC1	0/3.3	BB2_IC1	54
55	BB3_IC1	0/3.3	BB3_IC1	55
56	BB4_IC1	0/3.3	BB4_IC1	56
57	BB5_IC1	0/3.3	BB5_IC1	57
58	BB6_IC1	0/3.3	BB6_IC1	58
59	BB7_IC1	0/3.3	BB7_IC1	59
60	GND	0	GND	60
61	GND	0	GND	61
62	GND	0	GND	62
63	SCL_VS	3.1	SCL_VS	63
64	GND	0	GND	64
65	SDA_VS	3.1	SDA_VS	65
66	GND	0	GND	66
67	GND	0	GND	67
68	GND	0	GND	68
69	NC	0	NC	69
70	GND	0	GND	70
71	NC	0	NC	71
72	GND	0	GND	72
73	NC	0	NC	73
74	GND	0	GND	74
75	NC	0	NC	75
76	NC	0	NC	76
77	IN4_DET	0	IN4_DET	77
78	IN3_DET	0	IN3_DET	78
79	SLOT_ST2	3	SLOT_ST2	79
80	SR_VS	5.1	SR_VS	80
81	NC	0	NC	81
82	3G4G	3.3	3G4G	82
83	GND	0	GND	83
84	GND	0	GND	84
85	IN5_DET	0	IN5_DET	85
86	GND	0	GND	86
87	DE_IC1	2.5	DE_IC1	87
88	GND	0	GND	88
89	CK_IC1	1.5	CK_IC1	89
90	GND	0	GND	90
91	GND	0	GND	91
92	BA7_IC1	0/3.3	BA7_IC1	92
93	BA6_IC1	0/3.3	BA6_IC1	93
94	BA5_IC1	0/3.3	BA5_IC1	94

RGB ASSY — VIDEO SLOT I/F ASSY

R12 (CN7405)		Voltage (V)	VS4 (CN8953)	
No.	Name		Name	No.
95	BA4_IC1	0/3.3	BA4_IC1	95
96	BA3_IC1	0/3.3	BA3_IC1	96
97	BA2_IC1	0/3.3	BA2_IC1	97
98	BA1_IC1	0/3.3	BA1_IC1	98
99	BA0_IC1	0/3.3	BA0_IC1	99
100	GND	0	GND	100
101	GND	0	GND	101
102	GA7_IC1	0/3.3	GA7_IC1	102
103	GA6_IC1	0/3.3	GA6_IC1	103
104	GA5_IC1	0/3.3	GA5_IC1	104
105	GA4_IC1	0/3.3	GA4_IC1	105
106	GA3_IC1	0/3.3	GA3_IC1	106
107	GA2_IC1	0/3.3	GA2_IC1	107
108	GA1_IC1	0/3.3	GA1_IC1	108
109	GA0_IC1	0/3.3	GA0_IC1	109
110	GND	0	GND	110
111	GND	0	GND	111
112	RA7_IC1	0/3.3	RA7_IC1	112
113	RA6_IC1	0/3.3	RA6_IC1	113
114	RA5_IC1	0/3.3	RA5_IC1	114
115	RA4_IC1	0/3.3	RA4_IC1	115
116	RA3_IC1	0/3.3	RA3_IC1	116
117	RA2_IC1	0/3.3	RA2_IC1	117
118	RA1_IC1	0/3.3	RA1_IC1	118
119	RA0_IC1	0/3.3	RA0_IC1	119
120	GND	0	GND	120
121	GND	0	GND	121
122	GND	0	GND	122

AV I/O ASSY — AUDIO AMP ASSY

AV1 (CN7601)		Voltage (V)	AP2 (CN5001)	
No.	Name		Name	No.
1	A_NG	3.2	A_NG	15
2	TEMP3	0-3.3	TEMP3	14
3	A_MUTE	0	A_MUTE	13
4	ST_BY	2.5	ST_BY	12
5	GND	0	GND	11
6	V+6V	6.8	V+6V	10
7	V+3V	3.3	V+3V	9
8	V+12A	12	V+12A	8
9	GND	0	GND	7
10	-R_OUT	6	-R_OUT	6
11	+R_OUT	6	+R_OUT	5
12	GND	0	GND	4
13	-L_OUT	6	-L_OUT	3
14	+L_OUT	6	+L_OUT	2
15	GND	0	GND	1

AV I/O ASSY — KEY CONTROL ASSY

AV2 (CN8702)		Voltage (V)	KY1 (CN9001)	
No.	Name		Name	No.
1	GND	0	GND	1
2	KEY	3.3	KEY	2
3	V+3VSTB	3.3	V+3VSTB	3

AV I/O ASSY — LED OPT ASSY

AV3 (CN8703)		Voltage (V)	KY1 (CN9651)	
No.	Name		Name	No.
1	V+3STB	3.3	V+3STB	1
2	LED_ G	0	LED_ G	2
3	LED_ R	3.3	LED_ R	3
4	GND	0	GND	4
5	AC_ DET	3	AC_ DET	5

AV I/O ASSY — COMM SLOT I/F ASSY

AV5 (CN8704)		Voltage (V)	KY1 (CN8905)	
No.	Name		Name	No.
1	STL_LINK	3.3	STL_LINK	1
2	CB_MUTE	3.3	CB_MUTE	2
3	KEY	3.3	KEY	3
4	RXD	3.3	RXD	4
5	TXD	3.3	TXD	5
6	GND	0	GND	6

AUDIO AMP ASSY — POWER SUPPLY ASSY

AP1 (CN5002)		Voltage (V)	P6	
No.	Name		Name	No.
1	V+16R5	16.7	V+16R5	1
2	V+16R5	16.7	V+16R5	2
3	GNDP	0	GNDP	3
4	GNDP	0	GNDP	4
5	GNDP	0	GNDP	5
6	GNDP	0	GNDP	6

AUDIO AMP ASSY — SP TERMINAL R ASSY

AP3 (CN5003)		Voltage (V)	SP2 (CN9801)	
No.	Name		Name	No.
1	GND	0	GND	1
2	R+	5.3	R+	2
3	R-	5.2	R-	3
			SP TERMINAL L ASSY	
			SP1 (CN9702)	
4	STBGND	0	STBGND	1
5	TEMP3	0-3.3	TEMP3	2
6	V+3VDD	3.3	V+3VDD	3
7	GND	0	GND	4
8	L+	5.3	L+	5
9	L-	5.2	L-	6

KEY CONTROL ASSY — SIDE KEY ASSY

KY2 (CN9002)		Voltage (V)	KY3 (CN4801)	
No.	Name		Name	No.
1	D7	0/3.3	D7	1
2	D6	0/3.3	D6	2
3	D5	0/3.3	D5	3
4	G0	0/3.3	G0	4
5	G1	0/3.3	G1	5
6	G2	0/3.3	G2	6
7	G3	0/3.3	G3	7
8	GND	0	GND	8

COMM SLOT I/F ASSY — IR ASSY

CS4 (CN8901)		Voltage (V)	RE1 (CN4901)	
No.	Name		Name	No.
1	V+3STB	3.3	V+3STB	1
2	GND	0	GND	2
3	SR	0	SR	3
4	GND	0	GND	4

COMM SLOT I/F ASSY — COMM SLOT ASSY

CS5 (CN8904)		Voltage (V)	CN9454	
No.	Name		Name	No.
1	NC	0	NC	1
2	IRSW	0	IRSW	2
3	IR_COMM_OUT	5.1	IR_COMM_OUT	3
4	IR_COMM_IN	5.1	IR_COMM_IN	4
5	GND	0	GND	5
6	GND	0	GND	6
7	GND	0	GND	7
8	CYOBI3	0	CYOBI3	8
9	CYOBI2	0	CYOBI2	9
10	CSL_ST2	3.3	CSL_ST2	10
11	CSL_ST1	3.3	CSL_ST1	11
12				12
13				13
14	GND	0	GND	14
15	GND	0	GND	15
16	FIRST_RXD	3.3	FIRST_RXD	16
17	GET_UART	3.3	GET_UART	17
18	INT_EXT	3.3	INT_EXT	18
19	RXD_CARD	0	RXD_CARD	19
20	TXD_CARD	0	TXD_CARD	20
21	GPC5	0	GPC5	21
22	GPC4	0	GPC4	22
23	GPC3	0	GPC3	23
24	GPC2	0	GPC2	24
25	GPC1	0	GPC1	25
101	NC	0	NC	101
102	GND	0	GND	102
103	GND	0	GND	103
104	GND	0	GND	104
105	TXD_PDP	3.3	TXD_PDP	105
106	RXD_PDP	3.3	RXD_PDP	106
107	KEY_COMM_IN	3.3	KEY_COMM_IN	107
108	CB_MUTE	3.3	CB_MUTE	108
109	STL_LINK	3.3	STL_LINK	109
110	GND	0	GND	110
111	GND	0	GND	111
114	V+6.5V	6.8	V+6.5V	114
115	V+6.5V	6.8	V+6.5V	115
116	GND	0	GND	116
117	GND	0	GND	117
118	V+3VSTB	3.3	V+3VSTB	118
119	V+3VSTB	3.3	V+3VSTB	119
120	NC	0	NC	120
121	NC	0	NC	121
122	NC	0	NC	122
123	NC	0	NC	123
124	NC	0	NC	124
125	NC	0	NC	125

COMM SLOT I/F ASSY

CS3 (CN8903)		Voltage (V)	VS2 (CN8952)	
No.	Name		Name	No.
1	GND	0	GND	1
2	FIRST_RXD	3.3	FIRST_RXD	2
3	GET_UART	3.3	GET_UART	3
4	INT_EXT	3.3	INT_EXT	4
5	RXD_GU	0	RXD_GU	5
6	TXD_GU	0	TXD_GU	6
7	GPC5	0	GPC5	7
8	GPC4	0	GPC4	8
9	GPC3	0	GPC3	9
10	GPC2	0	GPC2	10
11	GPC1	0	GPC1	11

VIDEO SLOT I/F ASSY VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	G_SLOT	0	G_SLOT	3
4	GND	0	GND	4
5	B_SLOT	0	B_SLOT	5
6	GND	0	GND	6
7	R_SLOT	0	R_SLOT	7
8	GND	0	GND	8
9	HD_SLOT	0	HD_SLOT	9
10	GND	0	GND	10
11	VD_SLOT	0	VD_SLOT	11
12	GND	0	GND	12
13	AUDIO_L_SLOT	6	AUDIO_L_SLOT	13
14	GND	0	GND	14
15	AUDIO_R_SLOT	6	AUDIO_R_SLOT	15
16	GND	0	GND	16
17	SLOT_ST1	0	SLOT_ST1	17
18	S_DIN_SEL	0	S_DIN_SEL	18
19	FNC_1	0	FNC_1	19
20	FNC_0	5	FNC_0	20
21	V+3.3V	3.2	V+3.3V	21
22	V+3.3V	3.2	V+3.3V	22
23	VD_DET	0	VD_DET	23
24	GND	0	GND	24
25	HD_DET	0	HD_DET	25
26	GND	0	GND	26
27	VD	3.2	VD	27
28	GND	0	GND	28
29	HD	3	HD	29
30	GND	0	GND	30
31	GND	0	GND	31
32	RB0_IC1	0/3.3	RB0_IC1	32
33	RB1_IC1	0/3.3	RB1_IC1	33
34	RB2_IC1	0/3.3	RB2_IC1	34
35	RB3_IC1	0/3.3	RB3_IC1	35
36	RB4_IC1	0/3.3	RB4_IC1	36
37	RB5_IC1	0/3.3	RB5_IC1	37
38	RB6_IC1	0/3.3	RB6_IC1	38
39	RB7_IC1	0/3.3	RB7_IC1	39
40	GND	0	GND	40
41	GND	0	GND	41
42	GB0_IC1	0/3.3	GB0_IC1	42

VIDEO SLOT I/F ASSY VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
43	GB1_IC1	0/3.3	GB1_IC1	43
44	GB2_IC1	0/3.3	GB2_IC1	44
45	GB3_IC1	0/3.3	GB3_IC1	45
46	GB4_IC1	0/3.3	GB4_IC1	46
47	GB5_IC1	0/3.3	GB5_IC1	47
48	GB6_IC1	0/3.3	GB6_IC1	48
49	GB7_IC1	0/3.3	GB7_IC1	49
50		Å		50
51		Å		51
52	GND	0	GND	52
53	GND	0	GND	53
54	BB0_IC1	0/3.3	BB0_IC1	54
55	BB1_IC1	0/3.3	BB1_IC1	55
56	BB2_IC1	0/3.3	BB2_IC1	56
57	BB3_IC1	0/3.3	BB3_IC1	57
58	BB4_IC1	0/3.3	BB4_IC1	58
59	BB5_IC1	0/3.3	BB5_IC1	59
60	BB6_IC1	0/3.3	BB6_IC1	60
61	BB7_IC1	0/3.3	BB7_IC1	61
62	GND	0	GND	62
63				63
64				64
65	GND	0	GND	65
66	GND	0	GND	66
67	KEY	3.3	KEY	67
68	NC	0	NC	68
69	TXD_CARD	0	TXD_CARD	69
70	RXD_CARD	0	RXD_CARD	70
71	INT_EXT	3.3	INT_EXT	71
72	NC	0	NC	72
73	EMGREQ1_V	0	EMGREQ1_V	73
74	EMGREQ2_V	0	EMGREQ2_V	74
75	IC1V_OE	3.3	IC1V_OE	75
76	RESETX1	3.3	RESETX1	76
77	NC	0	NC	77
78	SD_SEL	3.3	SD_SEL	78
79	FNC2	0	FNC2	79
80	FNC3	0	FNC3	80
81	SOUND1	3.3	SOUND1	81
82	GND	0	GND	82
83	DSUBR	3.8	DSUBR	83
84	GND	0	GND	84
85	DSUBG	0	DSUBG	85
86	GND	0	GND	86
87	DSUBB	3.8	DSUBB	87
88	GND	0	GND	88
89	IN5_HD	0	IN5_HD	89
90	SOUSA_X	3.3	SOUSA_X	90
91	GPC1	0	GPC1	91
92	GPC2	0	GPC2	92
93	GPC5	0	GPC5	93
94	VYOBI1	0	VYOBI1	94
95	VYOBI2	0	VYOBI2	95
96	DSUBSW_DET	0	DSUBSW_DET	96
101	GND	0	GND	101
102	GND	0	GND	102
103	GND	0	GND	103

VIDEO SLOT I/F ASSY — VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
104	SCL_VS	3.1	SCL_VS	104
105	GND	0	GND	105
106	SDA_VS	3.1	SDA_VS	106
107	GND	0	GND	107
108	GND	0	GND	108
109	GND	0	GND	109
110	V+12V	12.9	V+12V	110
111	GND	0	GND	111
112	NC	0	NC	112
113	GND	0	GND	113
114	V+3.3STB	3.3	V+3.3STB	114
115	V+13.5	13.6	V+13.5	115
116	V+13.5	13.6	V+13.5	116
117	IN4_DET	0	IN4_DET	117
118	IN3_DET	0	IN3_DET	118
119	SLOT_ST2	3	SLOT_ST2	119
120	IR	5.1	IR	120
121	NC	0	NC	121
122	NC	0	NC	122
123	GND	0	GND	123
124	GND	0	GND	124
125	3G4G	3.3	3G4G	125
126	IN5_DET	0	IN5_DET	126
127	GND	0	GND	127
128	DE	2.5	DE	128
129	GND	0	GND	129
130	CLK	1.5	CLK	130
131	GND	0	GND	131
132	BA7_IC1	0/3.3	BA7_IC1	132
133	BA6_IC1	0/3.3	BA6_IC1	133
134	BA5_IC1	0/3.3	BA5_IC1	134
135	BA4_IC1	0/3.3	BA4_IC1	135
136	BA3_IC1	0/3.3	BA3_IC1	136
137	BA2_IC1	0/3.3	BA2_IC1	137
138	BA1_IC1	0/3.3	BA1_IC1	138
139	BA0_IC1	0/3.3	BA0_IC1	139
140	GND	0	GND	140
141	GND	0	GND	141
142	GA7_IC1	0/3.3	GA7_IC1	142
143	GA6_IC1	0/3.3	GA6_IC1	143
144	GA5_IC1	0/3.3	GA5_IC1	144
145	GA4_IC1	0/3.3	GA4_IC1	145
146	GA3_IC1	0/3.3	GA3_IC1	146
147	GA2_IC1	0/3.3	GA2_IC1	147
148	GA1_IC1	0/3.3	GA1_IC1	148
149	GA0_IC1	0/3.3	GA0_IC1	149
150		Å@		150
151		Å@		151
152	GND	0	GND	152
153	GND	0	GND	153
154	RA7_IC1	0/3.3	RA7_IC1	154
155	RA6_IC1	0/3.3	RA6_IC1	155
156	RA5_IC1	0/3.3	RA5_IC1	156
157	RA4_IC1	0/3.3	RA4_IC1	157
158	RA3_IC1	0/3.3	RA3_IC1	158
159	RA2_IC1	0/3.3	RA2_IC1	159
160	RA1_IC1	0/3.3	RA1_IC1	160

VIDEO SLOT I/F ASSY — VIDEO SLOT 1 and 2 ASSY

VS5 (CN8954)		Voltage (V)	CN7902	
No.	Name		Name	No.
161	RA0_IC1	0/3.3	RA0_IC1	161
162	GND	0	GND	162
163				163
164				164
165	GND	0	GND	165
166	GND	0	GND	166
167	VSEPSCL	3.3	VSEPSCL	167
168	VSEPSDA	3.3	VSEPSDA	168
169	NC	0	NC	169
170	GET_UART	3.3	GET_UART	170
171	FIRST_RXD	3.3	FIRST_RXD	171
172	NC	0	NC	172
173	EMGREQ1_S	0	EMGREQ1_S	173
174	EMGREQ2_S	0	EMGREQ2_S	174
175	IC1S_OE	0	IC1S_OE	175
176	NC	0	NC	176
177	NC	0	NC	177
178	NC	0	NC	178
179	SLOT_ST3	0.4	SLOT_ST3	179
180	M_CHOICE	0	M_CHOICE	180
181	SOUND2	0	SOUND2	181
182	GND	0	GND	182
183	GND	0	GND	183
184	DSUBH	4.5	DSUBH	184
185	GND	0	GND	185
186	DSUBV	4.95	DSUBV	186
187	GND	0	GND	187
188	GND	0	GND	188
189	IN5_VD	3.3	IN5_VD	189
190	HYOUJI_X	0	HYOUJI_X	190
191	GPC3	0	GPC3	191
192	GPC4	0	GPC4	192
193	NC	0	NC	193
194	VYOBI4	0	VYOBI4	194
195	VYOBI5	0	VYOBI5	195
196	VYOBI6	0	VYOBI6	196

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→	*56 x 10^1*	→ *561*	*RD1/4PU 5 6 1 J*
47k Ω	→	*47 x 10^3*	→ *473*	*RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50*		*RN2H R 5 0 K*
1 Ω	→	*1R0*		*RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→	*562 x 10^1*	→ *5621*	*RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1..50	ADDRESS ASSY	AWV2069
NSP	2..50	ADDRESS ASSY	AWZ6839
NSP	1..50	SCAN FUKUGO ASSY	AWV2036
NSP	2..50	SCAN A ASSY	AWZ6809
NSP	2..50	SCAN B ASSY	AWZ6810
NSP	2..X	CONNECTOR A ASSY	AWZ6811
NSP	2..X	CONNECTOR B ASSY	AWZ6812
NSP	1..50	X DRIVE ASSY	AWV2034
	2..	PANEL SENSOR ASSY	AWZ6795
	2..50	X DRIVE ASSY	AWZ6808
	1..50	Y DRIVE ASSY	AWV2035
NSP	1..	RGB ASSY	AWV2095
	2..	SIDE KEY ASSY	AWZ6852
	2..	RGB ASSY	AWZ6883
NSP	1..	CMX FUKUGO ASSY	AWV2096
	2..	AV I/O ASSY (PDP-504CMX type)	AWZ6847
	2..	AV I/O ASSY (PDP-50MXE1, PDP-50MXE1-S type)	AWZ6893
	2..	AUDIO AMP ASSY	AWZ6848
	2..	COMM SLOT ASSY	AWZ6849
	2..	COMM SLOT I/F	AWZ6850
	2..	VIDEO SLOT I/F ASSY (PDP-504CMX type)	AWZ6851
	2..	VIDEO SLOT I/F ASSY (PDP-50MXE1, PDP-50MXE1-S type)	AWZ6901
	2..	KEY CONTROL ASSY	AWZ6853
	2..	LED OPT ASSY	AWZ6854
	2..	IR RECIVE ASSY	AWZ6855
	2..	SP TERMINAL ASSY	AWZ6856
	2..	SP TERMINAR ASSY (PDP-504CMX type)	AWZ6857
	2..	SP TERMINAR ASSY (PDP-50MXE1, PDP-50MXE1-S type)	AWZ6896
	2..	COVER ASSY	AWZ6858
	2..	AV I/O I/F ASSY	AWZ6859
	1..	DIGITAL VIDEO ASSY	AWV2100
	1..	VIDEO SLOT1 ASSY (For PDA-5003)	AWV2097
	1..	VIDEO SLOT2 ASSY (For PDA-5004)	AWV2098

CONTRAST OF PCB ASSEMBLIES

AV I/O ASSY

AWZ6847 and AWZ6893 are constructed the same except for the following :

Mark	No. Description	AWZ6847	AWZ6893
	[AV I/O BLOCK]		
	R7771	RS1/16S0R0J	Not used
	R7772	Not used	RS1/16S0R0J

VIDEO SLOT I/F ASSY

AWZ6851 and AWZ6901 are constructed the same except for the following :

Mark	No. Description	AWZ6851	AWZ6901
	R8881	RS1/16S0R0J	Not used
	R8882	Not used	RS1/16S0R0J

SP TERMINAL R ASSY

AWZ6857 and AWZ6896 are constructed the same except for the following :

Mark	No. Description	AWZ6857	AWZ6896
	R9991	RS1/16S0R0J	Not used
	R9992	Not used	RS1/16S0R0J

PCB PARTS LIST for PDP-504CMX/LUC

Mark	No.	Description	Part No.
		50 ADDRESSASSY	
		[50 ADR LOGICBLOCK]	
		SEMICONDUCTORS	
		IC1501	PEE001B
		COILS AND FILTERS	
		F1501-F1503	ATF1194
		CAPACITORS	
		C1553, C1556, C1559, C1560, C1563	ACG1105
		C1501, C1502	ACH1357
		C1503-C1507, C1552, C1555, C1558	CKSSYF104Z16
		C1561, C1564	CKSSYF104Z16
		RESISTORS	
		R1510, R1519, R1522, R1526	RAB4C470J
		R1505-R1509	RS1/16SS1000F
		Other Resistors	RS1/16S###J
		OTHERS	
		CN1501 40P FFC CONNECTOR	AKM1215

Mark No.	Description	Part No.
	[50 ADR RESONANCE BLOCK]	
	SEMICONDUCTORS	
	IC1601-IC1603	TND304S
	Q1604	2SA1163
	Q1601	HAT1081R
	Q1602, Q1603	HAT3019R
	D1601	1SS302
	D1608, D1609, D1617, D1618	EC10UA20
	D1610, D1611, D1616, D1619, D1620	EC11FS2
	D1604, D1612	MA126
	D1602, D1606, D1607, D1614, D1615	UDZS15B
	D1621, D1622	UDZS24B
	COILS AND FILTERS	
	L1601, L1602	ATH1135
	CAPACITORS	
	C1609, C1615 (0.47microF)	ACE1172
	C1605, C1607, C1608, C1613, C1614 (0.01microF/100V)	ACG1101
	C1618	ACH1357
	C1603 (47microF/16V)	ACH1391
	C1601, C1602 (56microF/80V)	ACH1405
	C1604, C1606, C1612	CKSSYF104Z16
	RESISTORS	
	R1631	ACN1174
	R1633	RS1/16S1202F
	R1632	RS1/16S1502F
	Other Resistors	RS1/16S###J

50 SCAN A ASSY

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	IC3001-IC3006	AN16003A
	D3001	KU10N16
	CAPACITORS	
	C3001, C3002, C3012, C3013 (0.1microF/250V)	ACG1088
	C3023, C3024, C3034, C3035 (0.1microF/250V)	ACG1088
	C3045, C3046, C3056, C3057 (0.1microF/250V)	ACG1088
	C3005, C3008, C3016, C3019, C3026	CCSRCH101J50
	C3029, C3037, C3040, C3048, C3051	CCSRCH101J50
	C3060, C3063	CCSRCH101J50
	C3004	CCSRCH151J50
	C3007, C3018, C3033, C3044, C3050	CCSRCH181J50
	C3062	CCSRCH181J50
	C3006, C3011, C3017, C3022	CCSRCH331J50
	C3031, C3032, C3042, C3043, C3049	CCSRCH331J50
	C3055, C3061, C3066	CCSRCH331J50
	C3009, C3010, C3020, C3021, C3028	CCSRCH390J50
	C3030, C3039, C3041, C3053, C3054	CCSRCH390J50
	C3064, C3065	CCSRCH390J50
	C3003, C3014, C3025, C3036, C3047	CKSRYB105K6R3
	C3058	CKSRYB105K6R3
	RESISTORS	
	R3003, R3011, R3017, R3025, R3030	RAB4C221J
	R3036	RAB4C221J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN3001 15P CONNECTOR	AKP1218
	K3001, K3004, K3009, K3015, K3017 TEST PIN	AKX9002
	K3019, K3021 TEST PIN	AKX9002

50 SCAN B ASSY

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	IC3201-IC3206	AN16003A
	D3201	KU10N16
	CAPACITORS	
	C3201, C3211, C3212, C3222, C3223 (0.1microF/250V)	ACG1088
	C3233, C3234, C3244, C3245 (0.1microF/250V)	ACG1088
	C3255, C3256, C3266 (0.1microF/250V)	ACG1088
	C3203, C3204, C3214, C3215, C3226	CCSRCH101J50
	C3228, C3237, C3239, C3247, C3251	CCSRCH101J50
	C3258, C3259	CCSRCH101J50
	C3262	CCSRCH151J50
	C3206, C3217, C3232, C3243, C3249	CCSRCH181J50
	C3261	CCSRCH181J50
	C3205, C3210, C3216, C3221	CCSRCH331J50
	C3230, C3231, C3241, C3242, C3248	CCSRCH331J50
	C3254, C3260, C3265	CCSRCH331J50
	C3208, C3209, C3219, C3220, C3227	CCSRCH390J50
	C3229, C3238, C3240, C3252, C3253	CCSRCH390J50
	C3263, C3264	CCSRCH390J50
	C3202, C3213, C3224, C3235, C3246	CKSRYB105K6R3
	C3257	CKSRYB105K6R3
	RESISTORS	
	R3202, R3210, R3216, R3224, R3229	RAB4C221J
	R3235	RAB4C221J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN3201 15P CONNECTOR	AKP1218
	K3203, K3208, K3214, K3216, K3218 TEST PIN	AKX9002
	K3220, K3221 TEST PIN	AKX9002

X CONNECTOR A ASSY

This assembly has no service part.

X CONNECTOR B ASSY

This assembly has no service part.

50 X DRIVE ASSY

Mark No.	Description	Part No.
	[50 X LOGIC BLOCK]	
	SEMICONDUCTORS	
	IC1002	TC74ACT540FT
	IC1001	TC74ACT541FT
	IC1003	TC74VHC08FT
	CAPACITORS	
	C1001	CEHAT470M25
	C1002-C1004	CKSRYB104K16
	RESISTORS	
	R1001, R1002, R1005	RAB4C470J
	R1003, R1004, R1007	RAB4C472J

Mark No.	Description	Part No.
	OTHERS	
	CN1001 30P FFC CONNECTOR	AKM1218
	[50 X RESONANCE BLOCK]	
	SEMICONDUCTORS	
	IC1103	BA10393F
	IC1101, IC1102	TND506MD
	Q1113	2SC2412K
	Q1102, Q1103, Q1111, Q1112	2SK3560
	Q1105, Q1106, Q1108, Q1109	2SK3723
	Q1101, Q1104, Q1107, Q1110	CPH5506
	D1109, D1122	1SS302
	D1131, D1132	1SS355
	D1101, D1102, D1104, D1105	EC11FS4
	D1107, D1108, D1111, D1114-D1117	EC11FS4
	D1120, D1121, D1127, D1128	EC11FS4
	D1103, D1118, D1124, D1125, D1130	FCU20A30
	D1113, D1129	FCU20A30H
	D1110, D1123	UDZS16B
	COILS AND FILTERS	
	L1103, L1105	ATH1119
	L1104	ATH1155
	L1102	ATH1156
	L1101	LFEA470J
	CAPACITORS	
	C1112-C1114, C1125-C1127	ACE1168
	C1111, C1124 (100pF/630V)	ACG1104
	C1109, C1119 (0.1microF/630V)	ACG1108
	C1101, C1105, C1116, C1117	CCSRCH331J50
	C1128, C1130-C1132	CKSRYB104K16
	C1102, C1118	CKSRYB105K6R3
	C1104, C1108, C1115, C1122	CKSYB105K25
	RESISTORS	
	R1116, R1122	RS1/10S1003F
	R1133, R1143-R1145	RS1/10S100J
	R1103, R1106, R1110, R1111	RS1/10S2R2J
	R1118, R1119, R1123, R1126, R1153	RS1/10S2R2J
	R1136	RS1/16S1202F
	R1139	RS1/16S3301F
	R1130	RS1/16S5601F
	R1134	RS1/16S8201F
	R1113, R1128	RS1MMF101J
	VR1101-VR1104	CCP1390
	Other Resistors	RS1/16S###J
	OTHERS	
	3301 SPACER	AEH1075
	3501 SCREW	PMH30P080FMC
	[50 X SUS BLOCK]	
	SEMICONDUCTORS	
	IC1202	HCPL-M611
	IC1205	NJM2872F05
	IC1203, IC1207	STK795-512
	IC1208	TLP181(P-GR)
	IC1204, IC1206	TND301S
	Q1207	2SC2412K
	Q1203	2SD1898
	Q1302	2SJ522
	Q1301	2SK2503

Mark No.	Description	Part No.
	Q1205	2SK3116-Z
	Q1206, Q1208	DTC124EK
	Q1201	HN1B04FU
	D1212	1SS302
	D1211, D1213, D1216	1SS355
	D1201, D1207	EC10QS04
	D1204, D1301	EC11FS4
	D1214	EC8FS6
	D1208	UDZS5.6B
	COILS AND FILTERS	
	L1204, L1205	ATH1112
	L1202	LFEA100J
	L1203, L1206	LFEA470J
	CAPACITORS	
	C1214-C1217, C1227-C1230	ACE1163
	C1233	ACE1169
	C1244	ACE1170
	C1209 (0.1microF/630V)	ACG1092
	C1219, C1231	ACH1358
	C1224	CEHAT101M16
	C1301	CEHAT221M25
	C1203, C1207, C1210, C1220, C1223	CEHAT470M25
	C1238, C1239	CEHAT470M25
	C1235	CKSRYB102K50
	C1213, C1225, C1240, C1241, C1243	CKSRYB104K16
	C1202, C1205, C1206, C1212, C1302	CKSRYF104Z50
	RESISTORS	
	R1230	ACN1166
	R1208, R1321, R1322	ACN1174
	R1304	ACN1195
	R1305	ACN1198
	R1301, R1302, R1314	RS1/10S122J
	R1226, R1251	RS1MMF331J
	R1235, R1236	RS2MMF121J
	Other Resistors	RS1/16S###J
	OTHERS	
	KN1201-KN1205, KN1208-KN1214 GROUND PLATE	ANK-142
	CN1201 12P TOP POST	B12B-EH
	[50 X D-D CON BLOCK]	
	SEMICONDUCTORS	
	IC1404	AN1431M
	IC1402	MIP161
	IC1401, IC1403	TLP181(P-GR)
	Q1401	2SA1037K
	Q1402	2SC2412K
	D1407, D1408	EC11FS2
	D1404	EC8FS6
	D1401, D1403	UDZS5.6B
	COILS AND FILTERS	
	L1401	ATH1110
	T1401	ATK1153
	CAPACITORS	
	C1401, C1402	ACH1361
	C1404	CEHAT101M16
	C1405	CEHAT101M25

Mark No.	Description	Part No.
	C1409	CEHAT331M16
	C1403, C1407, C1408, C1411	CKSRYB104K16
A	C1406	CKSRYF104Z50
	RESISTORS	
	R1405, R1406, R1408-R1410, R1414	RS1/10S3602F
	R1420	RS1/16S1101F
	R1403	RS1/16S2702F
	R1401, R1404	RS1/16S4701F
	R1417	RS1/16S7500F
	VR1401	CCP1390
	Other Resistors	RS1/16S###J
B	**RESISTORS**	
	Other Resistors	RS1/16S###J
	OTHERS	
	1002 CARD SPACER	AEC1957
	1001 DRIVE SIRICON SHEET	AEH1062
	1001 PLATE X	ANG2622
	1001 DRIVE HEATSINK A	ANH1613
	1001 SCREW	BMZ30P080FZK
	1002 SCREW	PMB30P060FNI
C	**PANEL SENSOR ASSY**	
	SEMICONDUCTORS	
	IC1072	MM1522XU
	IC1071	MM3012XN
	CAPACITORS	
	C1075	ACH1357
	C1074	CKSRYB103K50
	C1071, C1076	CKSRYB104K16
	C1072, C1073	CKSRYF105Z10
D	**RESISTORS**	
	R1076, R1078	RS1/16S1001F
	Other Resistors	RS1/16S###J
	50 Y DRIVE ASSY	
	[50 Y LOGIC BLOCK]	
	SEMICONDUCTORS	
	IC2002	TC74ACT540FT
	IC2001, IC2003	TC74ACT541FT
	IC2005	TC74VHC08FT
E	IC2004	TC74VHC541FT
	Q2001	DTC124EK
	CAPACITORS	
	C2001	CEHAT470M16
	C2010, C2011	CKSRYB104K16
	C2002-C2006	CKSRYF104Z50
	RESISTORS	
	R2018, R2019	RAB4C102J
	R2002, R2004, R2013-R2015	RAB4C470J
	R2005, R2006, R2012, R2016, R2017	RAB4C472J
F	Other Resistors	RS1/16S###J
	OTHERS	
	CN2001	AKM1201

Mark No.	Description	Part No.
	[50 Y RESONANCE BLOCK]	
	SEMICONDUCTORS	
	IC2211	BA10393F
	IC2201, IC2202	TND506MD
	Q2213	2SC2412K
	Q2202, Q2211, Q2212, Q2214	2SK3560
	Q2205, Q2206, Q2208, Q2209	2SK3723
	Q2201, Q2204, Q2207, Q2210	CPH5506
	D2209, D2223	1SS302
	D2230, D2232	1SS355
	D2202-D2205, D2207, D2208	EC11FS4
	D2213, D2214, D2216-D2219, D2222	EC11FS4
	D2226, D2227	EC11FS4
	D2201, D2206, D2211, D2220, D2229	FCU20A30
	D2215, D2228	FCU20A30H
	D2210, D2224	UDZS16B
	COILS AND FILTERS	
	L2203, L2205 CHOKE COIL	ATH1119
	L2204 CHOKE COIL	ATH1155
	L2202 CHOKE COIL	ATH1156
	L2201	LFEA470J
	CAPACITORS	
	C2212-C2214, C2225-C2227	ACE1168
	C2211, C2224 (100pF/630V)	ACG1104
	C2210, C2223 (0.1microF/630V)	ACG1108
	C2202, C2205, C2216, C2217	CCSRCH331J50
	C2230, C2232, C2233, C2235	CKSRYB104K16
	C2203, C2218	CKSRYB105K6R3
	C2201, C2208, C2215, C2219	CKSYB105K25
	RESISTORS	
	R2240, R2241	RS1/10S1003F
	R2244-R2247	RS1/10S100J
	R2204, R2205, R2211, R2213	RS1/10S2R2J
	R2220, R2221, R2224, R2228, R2253	RS1/10S2R2J
	R2234	RS1/16S1202F
	R2235	RS1/16S3301F
	R2233	RS1/16S5601F
	R2242	RS1/16S8201F
	R2215, R2230	RS1MMF101J
	VR2201-VR2204	CCP1390
	Other Resistors	RS1/16S###J
	OTHERS	
	3301 SPACER	AEH1075
	3501 SCREW	PMH30P080FMC
	[50 Y SUS BLOCK]	
	SEMICONDUCTORS	
	IC2302, IC2308	HCPL-M611
	IC2305	NJM2872F05
	IC2303, IC2307	STK795-513
	IC2301, IC2304, IC2309	TND301S
	Q2310	2SC2412K
	Q2303, Q2307	2SD1898
	Q2301	2SJ522
	Q2302, Q2308, Q2312	2SK3325-Z
	Q2309	HN1B04FU
	D2302	1SS302

Mark No.	Description	Part No.
D2319, D2320		EC10QS04
D2305		EC11FS4
D2301		UDZS16B
D2306, D2318		UDZS5.6B
COILS AND FILTERS		
L2306, L2307		ATH1112
L2304		LFEA100J
L2308		LFEA101J
L2301, L2302, L2305		LFEA470J
CAPACITORS		
C2309-C2312, C2326, C2327		ACE1163
C2329, C2330		ACE1163
C2314		ACE1165
C2302		ACG1092
C2316, C2331		ACH1358
C2303		ACH1361
C2336		ACH1393
C2306, C2334		CEHAT221M25
C2308, C2324, C2339, C2340		CEHAT470M16
C2304, C2320, C2338		CEHAT470M25
C2305, C2322, C2323, C2325, C2333		CKSRYB104K16
C2341		CKSRYB104K16
C2301, C2307, C2328		CKSRYF104Z50
RESISTORS		
R2332		ACN1166
R2364, R2365		ACN1174
R2309		RS1MMF132J
R2310, R2311		RS1MMF472J
R2312-R2314, R2322, R2323		RS3LMF100J
R2348, R2352, R2358, R2359		RS3LMF1R8J
Other Resistors		RS1/16S###J
OTHERS		
KN2301-KN2305, KN2310-KN2312		ANK-142
KN2314-KN2316 GROUND PLATE		ANK-142
CN2301 11P TOP POST		B11B-EH
[50 Y SCAN BLOCK]		
SEMICONDUCTORS		
IC2101, IC2103-IC2106,IC2108,IC2109		HCPL-M611
IC2102, IC2107		TC74ACT540FT
COILS AND FILTERS		
L2101-L2103		LFEA100J
CAPACITORS		
C2104, C2111, C2116, C2117		ACH1392
C2101, C2107, C2113		CEHAT221M16
C2102, C2103, C2105, C2106		CKSRYB104K16
C2108-C2110, C2112, C2114		CKSRYB104K16
RESISTORS		
R2121, R2128		RAB4C472J
Other Resistors		RS1/16S###J
OTHERS		
CN2101, CN2102 15P CONNECTOR		AKM1200
[50 Y D-D CON BLOCK]		
SEMICONDUCTORS		
IC2410-IC2412		AN1431M
IC2406		BA10358F

Mark No.	Description	Part No.
IC2401		MIP0223SC
IC2402-IC2405, IC2407-IC2409		TLP181(P-GR)
Q2402, Q2407		2SA1037K
Q2410		2SA1163
Q2417		2SA1535
Q2411-Q2414, Q2416		2SC2412K
Q2405		2SC2713
Q2403		2SD1664
Q2401, Q2404		2SD1898
Q2415		HN1C01FU
D2430		1SS301
D2410, D2419, D2436		1SS302
D2409, D2418		1SS355
D2404-D2407		EC11FS2
D2403, D2414		EC11FS4
D2402		EC8FS6
D2427		RD91PA
D2401		U1ZB330
D2412, D2413, D2422		UDZS15B
D2425, D2426		UDZS27B
D2415		UDZS33B
D2432		UDZS4.3B
D2423, D2431		UDZS5.6B
COILS AND FILTERS		
T2402		ATK1156
T2403		ATK1157
T2401		ATK1158
L2402		LFEA100J
L2401		LFEA101J
L2403		LFEA470J
CAPACITORS		
C2406		ACH1360
C2401		ACH1361
C2427		CEHAT100M50
C2403		CEHAT101M16
C2405, C2407, C2417		CEHAT101M25
C2414		CEHAT221M16
C2410		CEHAT221M25
C2411		CEHAT331M25
C2420		CEHAT470M2A
C2409, C2419		CKSRYB103K50
C2402, C2412, C2413, C2423, C2425		CKSRYB104K16
C2431, C2432, C2434-C2436		CKSRYB104K16
C2441-C2443		CKSRYB104K16
C2415, C2421, C2428		CKSRYB105K6R3
C2404, C2408, C2416, C2418, C2426		CKSRYF104Z50
C2429		CKSRYF104Z50
RESISTORS		
R2429		ACN1225
R2435, R2439		RS1/10S2202F
R2402-R2404		RS1/10S3902F
R2442		RS1/16S1201F
R2468		RS1/16S1202F
R2424		RS1/16S2001F
R2420, R2427, R2438		RS1/16S2201F
R2467		RS1/16S3301F
R2457-R2460		RS1/16S4701F

Mark	No.	Description	Part No.
		R2506	RS3LMF151J
		VR2401, VR2402	CCP1390
A		Other Resistors	RS1/16S###J
		OTHERS	
	2401	HEATSINK	ANH1614
	2401	SCREW	BBZ30P080FZK
	2002	CARD SPACER	AEC1957
	2001	DRIVE SIRICON SHEET	AEH1062
	2001	PLATE Y	ANG2557
	2001	DRIVE HEATSINK A	ANH1613
	2001	SCREW	BMZ30P080FZK
	2002	SCREW	PMB30P060FNI

B

RGB ASSY

[RGB BLOCK]

SEMICONDUCTORS

	IC7411	BD6522F
⚠	IC7412	M5291FP
	IC7402	MM1522XU
	IC7401	MM3012XN
	IC7404	NJM12904V
⚠	IC7408, IC7409	PQ05DZ11
C ⚠	IC7405, IC7410	PQ20WZ11
⚠	IC7406, IC7407	PQ3DZ13
	IC7403	TC74VHC08FT
	Q7405	2SA1586
	Q7407, Q7408, Q7410, Q7411	HN1A01FU
	Q7404	HN1C01FU
	Q7401	RN1901
	Q7409	RN1902
	D7408	1SS301
	D7407, D7409-D7414	1SS355
	D7415, D7416	EC11FS2

D

COILS AND FILTERS

	L7401	ATH1125

CAPACITORS

	C7408	ACH1357
	C7414, C7419, C7434, C7437 (100/25V)	ACH1374
	C7447, C7450 (47microF/16V)	ACH1391
	C7416, C7423, C7424, C7430 (100microF/16V)	ACH1394
	C7418, C7421, C7426, C7432, C7445 (100microF/6.3V)	ACH1396
E	C7452 (100microF/6.3V)	ACH1396
	C7403 (22microF/16V)	ACH1400
	C7428, C7429, C7448	CCSRCH221J50
	C7440, C7459-C7466	CKSRYB102K50
	C7407, C7409, C7453-C7455	CKSRYB103K50
	C7457, C7458	CKSRYB103K50
	C7436	CKSRYB104K16
	C7446	CKSRYB821K50
	C7413, C7435	CKSRYF104Z50
	C7402, C7410	CKSRYF105Z10
F	C7404-C7406, C7411, C7412, C7415	CKSSYF104Z16
	C7417, C7420, C7422, C7425, C7427	CKSSYF104Z16
	C7431, C7433, C7439, C7441-C7444	CKSSYF104Z16
	C7449, C7451	CKSSYF104Z16

Mark	No.	Description	Part No.

RESISTORS

	R7402, R7405, R7417	RAB4CQ101J
	R7426	RAB4CQ103J
	R7480	RS1/10S1R5J
	R7412, R7420, R7486	RS1/16S1001F
	R7437, R7439, R7467, R7469, R7476	RS1/16S1002F
	R7461	RS1/16S1501F
	R7422	RS1/16S1800F
	R7440, R7445	RS1/16S2201F
	R7477	RS1/16S2202F
	R7484	RS1/16S3301F
	R7438	RS1/16S4700F
	R7465	RS1/16S4702F
	R7460	RS1/16S6201F
	R7447	RS1/16S7500F
	R7478	RS1/16S8201F
	Other Resistors	RS1/16S###J

OTHERS

	CN7405 12P PLUG	AKM1203
	CN7401 15P PLUG	AKM1232
	CN7410 50P PLUG	AKM1270

[MAIN LPF BLOCK]

SEMICONDUCTORS

	IC6402	AN5870SB
	IC6404	BA7078AF
	IC6403	BA7657F
	IC6401	SM5301BS
	IC6407	TC74VHC08FT
	IC6405	TC74VHC125FT
	Q6419-Q6421	2SA1586
	Q6407, Q6417	DTC124EUA
	Q6402-Q6406, Q6408, Q6410, Q6412	HN1B04FU
	D6404	1SS302

COILS AND FILTERS

	L6401	LCTAW4R7J2520
	L6402	LCTAWR68J2520

CAPACITORS

	C6409, C6436, C6437, C6462, C6469	ACH1357
	C6402, C6405, C6406, C6427, C6428	ACH1391
	C6431 (47microF/16V)	ACH1391
	C6416, C6417, C6424 (100microF/16V)	ACH1394
	C6433 (10microF/16V)	ACH1399
	C6439 (22microF/16V)	ACH1400
	C6445	CCSRCH151J50
	C6435, C6467, C6468	CCSRCH470J50
	C6401, C6403, C6404, C6414, C6415	CKSRYB103K50
	C6423, C6429, C6430, C6432, C6438	CKSRYB103K50
	C6446, C6449, C6451, C6454, C6456	CKSRYB103K50
	C6459, C6461, C6470-C6476	CKSRYB103K50
	C6463	CKSRYB104K25
	C6408, C6411, C6412, C6421, C6455	CKSRYB105K6R3
	C6457, C6460	CKSRYB105K6R3
	C6458	CKSRYB471K50
	C6443	CKSRYB474K10
	C6442	CKSRYB562K50
	C6407, C6410, C6413, C6418-C6420	CKSSYF104Z16
	C6425, C6426, C6434, C6440, C6441	CKSSYF104Z16

Mark No.	Description	Part No.
	C6444, C6447, C6448, C6450	CKSSYF104Z16
	C6452, C6453	CKSSYF104Z16
RESISTORS		
	R6489	RAB4CQ470J
	R6422	RS1/16S1101F
	R6526-R6528	RS1/16S2200F
	R6428, R6429	RS1/16S3000F
	R6547-R6549	RS1/16S75R0F
	Other Resistors	RS1/16S###J
OTHERS		
	K6401-K6406 TEST PIN	AKX9002
	CN6402 6P PLUG	KM200NA6
[MAIN AD BLOCK]		
SEMICONDUCTORS		
	IC6001	CXA3516AR
	IC6002-IC6008	TC74LCX541FT
	Q6001	2SC4116
	D6001	1SS355
COILS AND FILTERS		
	L6001	LCTAWR68J2520
CAPACITORS		
	C6001, C6005, C6010, C6028, C6041	ACH1396
	C6043, C6051, C6054 (100microF/6.3V)	ACH1396
	C6020	CCSRCH101J50
	C6011	CCSRCH220J50
	C6017	CCSRCH331J50
	C6003, C6018, C6024, C6025	CKSRYB105K6R3
	C6033, C6034, C6037, C6038, C6045	CKSRYB105K6R3
	C6062-C6068	CKSRYB471K50
	C6002, C6004, C6006-C6009	CKSSYF104Z16
	C6012-C6016, C6021-C6023	CKSSYF104Z16
	C6026, C6027, C6029-C6032	CKSSYF104Z16
	C6035, C6036, C6039, C6040, C6042	CKSSYF104Z16
	C6044, C6046-C6050, C6052, C6053	CKSSYF104Z16
	C6055-C6061	CKSSYF104Z16
RESISTORS		
	R6001, R6004, R6013, R6014	RAB4CQ100J
	R6020, R6021, R6024, R6027, R6033	RAB4CQ100J
	R6038, R6044, R6054	RAB4CQ100J
	R6073-R6085	RAB4CQ330J
	R6023	RN1/16SE3001D
	R6018	RS1/16S2201F
	R6016	RS1/16S2701F
	R6019	RS1/16S3301F
	Other Resistors	RS1/16S###J
OTHERS		
	K6001-K6007, K6010-K6013 TEST PIN	AKX9002
[SUB LPF & AD BLOCK]		
SEMICONDUCTORS		
	IC6602	AD9883AKST-110
	IC6604	BA7078AF
	IC6601	SM5301BS
	IC6608-IC6614	TC74LCX541FT
	IC6605	TC74VHC08FT
	IC6603, IC6607	TC74VHC125FT

Mark No.	Description	Part No.
	Q6603, Q6604	DTC124EUA
	Q6605	HN1B04FU
COILS AND FILTERS		
	F6601	ATF1194
	L6701	LCTAWR68J2520
CAPACITORS		
	C6635-C6637, C6640	ACH1357
	C6633 (10microF/16V)	ACH1399
	C6644	CCSRCH151J50
	C6638	CKSRYB103K50
	C6604, C6624	CKSRYB104K16
	C6648	CKSRYB104K25
	C6608, C6611, C6612, C6621	CKSRYB105K6R3
	C6630-C6632	CKSRYB105K6R3
	C6646, C6656-C6661	CKSRYB471K50
	C6609, C6614, C6623	CKSRYB473K16
	C6642	CKSRYB474K10
	C6641	CKSRYB562K50
	C6602	CKSRYB822K50
	C6601	CKSRYB823K16
	C6605-C6607, C6610, C6613	CKSSYF104Z16
	C6615-C6620, C6625-C6629, C6634	CKSSYF104Z16
	C6639, C6643, C6645, C6647	CKSSYF104Z16
	C6649-C6655	CKSSYF104Z16
RESISTORS		
	R6699-R6710, R6723-R6728	RAB4CQ0R0J
	R6729-R6734	RAB4CQ101J
	R6608, R6613, R6621, R6627	RAB4CQ470J
	R6643, R6644, R6667-R6672	RAB4CQ470J
	R6676-R6678, R6681-R6685	RAB4CQ470J
	R6612, R6619, R6620	RS1/16S1000F
	R6625	RS1/16S1101F
	R6607, R6611, R6626	RS1/16S1300F
	R6601	RS1/16S2701F
	Other Resistors	RS1/16S###J
OTHERS		
	K6601-K6607 TEST PIN	AKX9002
[BUS SW1 BLOCK]		
SEMICONDUCTORS		
	IC5701	PD6435A
CAPACITORS		
	C5701 (47microF/16V)	ACH1391
	C5709, C5710	CCSRCH150J50
	C5721-C5737	CKSRYB103K50
	C5702-C5708, C5711, C5712	CKSSYF104Z16
	C5714-C5718	CKSSYF104Z16
RESISTORS		
	R5703-R5706, R5708-R5712, R5714	RAB4CQ100J
	R5717, R5721, R5735, R5739-R5750	RAB4CQ100J
	R5755, R5756, R5762, R5763	RAB4CQ100J
	R5768-R5771	RAB4CQ100J
	R5728-R5734, R5782-R5787	RAB4CQ103J
	Other Resistors	RS1/16S###J
OTHERS		
	CN5701 120P PCI BUS SOCKET	AKP1220
	X5701 CERAMIC RESONATOR	ASS1169

Mark No.	Description	Part No.
	[BUS SW2 BLOCK]	
	SEMICONDUCTORS	
	IC5801	PD6435A
	CAPACITORS	
	C5801 (47microF/16V)	ACH1391
	C5809, C5810	CCSRCH150J50
	C5802-C5808, C5811, C5812	CKSSYF104Z16
	C5814-C5818	CKSSYF104Z16
	RESISTORS	
	R5816-R5825, R5827, R5835, R5849	RAB4CQ100J
	R5852, R5854, R5856, R5858, R5860	RAB4CQ100J
	R5868-R5871, R5877	RAB4CQ100J
	R5802-R5808, R5812-R5814, R5831	RAB4CQ103J
	R5837, R5844, R5883	RAB4CQ103J
	R5845, R5850, R5851, R5853, R5855	RAB4CQ470J
	R5857, R5859, R5861-R5863, R5876	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	X5801 CERAMIC RESONATOR	ASS1169
	[IC2 BLOCK]	
	SEMICONDUCTORS	
	IC7001, IC7002	HY57V643220CT-7
	IC7004	PE5362A
	IC7003	TC74LCX125FT
	COILS AND FILTERS	
	F7001, F7002 EMI FILTER	ATF1194
	CAPACITORS	
	C7029, C7041 (100microF/6.3V)	ACH1396
	C7065	CCSRCH100D50
	C7066-C7068	CCSRCH221J50
	C7001-C7024, C7026-C7028	CKSSYF104Z16
	C7032-C7040, C7042-C7063	CKSSYF104Z16
	C7031	DCH1165
	RESISTORS	
	R7034	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	K7001-K7003 TEST PIN	AKX9002
	X7001 (85MHz)	ASS1174
	[IC3 BLOCK]	
	SEMICONDUCTORS	
	IC7102	24LC02B(I)SN
	IC7101	PD5855A
	COILS AND FILTERS	
	F7101, F7102	ATF1194
	CAPACITORS	
	C7103, C7120, C7138 (100microF/6.3V)	ACH1396
	C7141	CCSRCH100D50
	C7101, C7102, C7104-C7119	CKSSYF104Z16
	C7121-C7137, C7139, C7140, C7142	CKSSYF104Z16
	RESISTORS	
	R7102, R7105-R7108, R7110, R7111	RAB4CQ330J
	R7128, R7129, R7132, R7133	RAB4CQ330J
	R7136, R7137	RAB4CQ330J
	R7154	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN7101 114P FFC CONNECTOR	AKM1216
	K7101, K7102 TEST PIN	AKX9002
	[IC3 FLASH BLOCK]	
	SEMICONDUCTORS	
	IC7152	MBM29PL3200BE70PFV
	CAPACITORS	
	C7152, C7153, C7155-C7158, C7160	CKSSYF104Z16
	C7162	CKSSYF104Z16
	RESISTORS	
	Other Resistors	RS1/16S###J
	[MAIN UCOM BLOCK]	
	SEMICONDUCTORS	
	IC7205	24LC128(I)SN
	IC7201, IC7204	74VHCT00AMTC
	IC7207	MB91F355APMTGE1
	IC7210	PST3612UR
	IC7203, IC7206	PST3628UR
	IC7209	TC74VHC08FT
	IC7202	TC74VHC125FT
	IC7208	TC74VHCT541AFT
	Q7201	2SJ461A
	Q7202	DTC124EUA
	D7202	1SS355
	D7203	SML-310MT
	CAPACITORS	
	C7205, C7236 (47microF/16V)	ACH1391
	C7143, C7203	CCSRCH220J50
	C7213, C7218	CCSRCH7R0D50
	C7248-C7251	CKSRYB102K50
	C7235, C7245	CKSRYB103K50
	C7226, C7237	CKSRYB104K16
	C7230, C7242	CKSRYB104K25
	C7216	CKSRYB472K50
	C7201, C7202, C7209-C7212	CKSSYF104Z16
	C7214, C7215, C7219-C7225	CKSSYF104Z16
	C7227-C7229, C7232-C7234, C7238	CKSSYF104Z16
	C7240, C7241, C7243, C7244	CKSSYF104Z16
	C7246, C7247	CKSSYF104Z16
	RESISTORS	
	R7231	RAB4CQ0R0J
	R7229	RAB4CQ101J
	R7256	RAB4CQ103J
	R7218, R7219, R7284-R7286, R7301	RAB4CQ470J
	R7309, R7311-R7314, R7317	RAB4CQ470J
	R7201	RAB4CQ472J
	R7212, R7232	RS1/16S1202F
	Other Resistors	RS1/16S###J
	OTHERS	
	CN7201 8P PLUG	AKM1225
	X7201 CERAMIC RESONATOR	ASS1170

Mark	No.	Description	Part No.

SIDE KEY ASSY

SWITCHES AND RELAYS

	S4801-S4811	ASG1088

OTHERS

	CN4801 8P CONNECTOR	AKM1207

AV I/O ASSY

[AV I/O ASSY]

SEMICONDUCTORS

	IC7609	24LCS21A
	IC7610, IC7613	AN5870SB
	IC7602, IC7605-IC7607	BA4558F-HT
	IC7603	BD3869AF
⚠	IC7604	NJM78L09UA
	IC7601, IC7608	TC4052BFT
	IC7612	TC74AC04FT
	IC7611	TC74VHCT541AFT
	Q7602, Q7605, Q7702	2SC4116
	Q7603	DTA124EUA
	Q7604, Q7606-Q7608	DTC124EUA
	Q7701	HN1C01FU
	Q7601	RN1902
	Q7609	SM6K2
	D7601	1SS301
	D7606-D7608, D7610, D7611	1SS302
	D7613, D7614, D7616, D7617	1SS302
	D7619, D7701	1SS355
	D7602, D7603, D7605, D7609	UDZS5.6B
	D7604	UDZS6.8B

CAPACITORS

	C7633, C7634	CCSRCH101J50
	C7673, C7674	CCSRCH220J50
	C7631, C7632	CCSRCH221J50
	C7611, C7612	CCSRCH471J50
	C7722	CEHAT100M50
	C7654	CEHAT101M10
	C7665	CEHAT101M16
	C7623, C7648	CEHAT220M50
	C7705	CEHAT221M6R3
	C7714, C7716, C7718	CEHAT331M10
	C7619, C7635, C7637, C7695, C7697	CEHAT470M16
	C7721	CEHAT470M16
	C7681, C7686, C7690	CEHAT471M16
	C7601, C7602, C7609, C7610, C7614	CKSQYB225K10
	C7616, C7638, C7639, C7643, C7653	CKSQYB225K10
	C7627-C7630, C7640, C7650	CKSRYB102K50
	C7642, C7652, C7660, C7661, C7666	CKSRYB103K50
	C7676, C7680, C7685, C7689	CKSRYB103K50
	C7698-C7703, C7707, C7712, C7713	CKSRYB103K50
	C7715, C7717	CKSRYB103K50
	C7621, C7622	CKSRYB104K16
	C7603, C7620, C7662, C7663, C7667	CKSRYB105K10
	C7675, C7677, C7678, C7684	CKSRYB105K10
	C7693, C7694, C7723	CKSRYB105K10
	C7641, C7651	CKSRYB222K50
	C7646, C7656	CKSRYB471K50
	C7617, C7618, C7624-C7626, C7636	CKSSYF104Z16
	C7644, C7647, C7649, C7655, C7664	CKSSYF104Z16
	C7668, C7679, C7682, C7683, C7687	CKSSYF104Z16
	C7691, C7692, C7696, C7704, C7706	CKSSYF104Z16
	C7708-C7711, C7720	CKSSYF104Z16

RESISTORS

	R7751-R7753	RS1/16S2200F
	R7712, R7725	RS1/16S2201F
	R7699-R7701, R7741-R7743	RS1/16S27R0F
	R7653, R7654, R7673, R7674	RS1/16S3301F
	R7709-R7711	RS1/16S75R0F
	Other Resistors	RS1/16S###J

OTHERS

	CN7602, CN7603 MINI JACK	AKN1069
	JA7606, JA7607 15P D-SUB SOCKET	AKP1241
	CN7601 15P PLUG	KM200NA15

[IF UCOM BLOCK]

SEMICONDUCTORS

	IC8705	24LC01B
	IC8702	HD64F3687FP
	IC8703	PST9230N
	IC8701	TC74VHC08FT
	IC8704	TC7W126FU
	Q8701	2SJ461A
	Q8708	DTA124EUA
	Q8702	DTC124EUA

COILS AND FILTERS

	L8702	LCTAWR68J2520

CAPACITORS

	C8706, C8707	CCSRCH120J50
	C8708, C8714	CEHAT470M16
	C8704, C8718	CEHAT471M6R3
	C8717, C8720	CKSRYB103K50
	C8722-C8724	CKSRYB471K50
	C8709	CKSRYB472K50
	C8701-C8703, C8705, C8711-C8713	CKSSYF104Z16
	C8715, C8716, C8719, C8721, C8725	CKSSYF104Z16

RESISTORS

	R8719, R8720, R8723, R8724, R8726	RAB4C101J
	R8702, R8704, R8745	RAB4C103J
	R8736	RS1/16S1302F
	Other Resistors	RS1/16S###J

OTHERS

	CN8701 8P PLUG	AKM1225
	K8701-K8703 TEST PIN	AKX9002
	X8702 CERAMIC RESONATOR	ASS1168
	X8701 (32.768kHz)	ASS1172
	CN8704 6P PLUG	KM200NA6

[DVI BLOCK]

SEMICONDUCTORS

	IC7502	24LCS21A
	IC7511	BD6522F
	IC7503	SII1161CTG100
	IC7504-IC7510	TC74LCX541FT
	Q7503	DTA124EUA

Mark	No.	Description	Part No.
	Q7501, Q7502		DTC124EUA
	D7501		1SS301
	D7503, D7504		1SS302
A	D7502		UDZS6.8B
	CAPACITORS		
	C7524, C7526, C7530, C7532		CCSRCH101J50
	C7534, C7535, C7537, C7538		CCSRCH101J50
	C7541, C7542, C7546, C7548-C7550		CCSRCH101J50
	C7504, C7507		CCSRCH221J50
	C7528, C7578, C7579		CEHAT101M10
	C7522		CEHAT221M6R3
	C7502, C7510, C7516, C7518		CEHAT470M16
	C7503, C7506		CKSRYB222K50
	C7514, C7520, C7573-C7577		CKSRYB471K50
B	C7501, C7509, C7513, C7515, C7517		CKSSYF104Z16
	C7519, C7521, C7523, C7525, C7527		CKSSYF104Z16
	C7529, C7531, C7533, C7536		CKSSYF104Z16
	C7539, C7540, C7543-C7545, C7547		CKSSYF104Z16
	C7551-C7559		CKSSYF104Z16
	RESISTORS		
	R7560-R7565, R7568-R7573		RAB4CQ0R0J
	R7524-R7529, R7536, R7540		RAB4CQ100J
	R7552-R7555		RAB4CQ100J
	R7578-R7590		RAB4CQ470J
	R7538		RS1/16S3900F
C	Other Resistors		RS1/16S###J
	OTHERS		
	CN7501 STEREO MINI JACK		AKN1069
	CN7503 24P DVI TERMINAL		AKP1216

AUDIO AMP ASSY

SEMICONDUCTORS

	IC5002	BA4558F-HT
D	⚠IC5003	LA4625
	⚠IC5004	PQ12DZ11
	⚠IC5001	SI-8120S
	Q5005, Q5007, Q5008	2SA1586
	Q5001, Q5009	2SC4116
	Q5011, Q5012	2SD2114K
	Q5013	DTA124EUA
	D5003	1SS301
	D5001	1SS302
	D5002	1SS355
E	D5005	RK46
	COILS AND FILTERS	
	L5002	ATH1159
	CAPACITORS	
	C5049, C5080	CEHAT101M16
	C5045	CEHAT220M50
	C5010	CEHAT221M10
	C5022	CEHAT222M16
	C5047, C5048, C5081	CEHAT2R2M50
	C5050	CEHAT330M25
F	C5005-C5008, C5016	CEHAT470M16
	C5051	CEHATR47M50
	C5019, C5020	CEHAZL471M25
	C5002, C5004, C5017, C5027	CKSRYB103K50
	C5055-C5058	CKSRYB104K25
	C5043, C5044	CKSRYB222K50
	RESISTORS	
	R5049-R5052	RD1/4MUF2R2J
	R5053-R5056	RS1/10S5R6J
	R5001	RS1/16S1502F
	R5005, R5006, R5009, R5010	RS1/16S3301F
	R5003, R5004, R5007, R5008	RS1/16S6801F
	Other Resistors	RS1/16S###J
	OTHERS	
	CN5002 6P L-TYPE PLUG	KM200NA6
	5001 SCREW	VBB30P100FNI
	KN5001, KN5002 (WRAPPING TERMINAL)	VNF1084

COMM SLOT ASSY

SEMICONDUCTORS

IC9451	SP3232ECY
IC9452, IC9454	TC74VHC00FT
IC4953, IC4955	TC74VHC125FT
CAPACITORS	
C9455	CEJQ470M6R3
C9452, C9469-C9472	CKSRYB471K50
C9451, C9453, C9454, C9456-C9458	CKSSYF104Z16
C9462, C9467, C9468	CKSSYF104Z16
RESISTORS	
Other Resistors	RS1/16S###J
OTHERS	
3500 SCREW	ABA1295
3330 RIVET	AEP-211
JA9453 9P D-SUB SOCKET	AKP1240
JA9451, JA9452 6P MINI DIN JACK	AKP1254
3334 PROTECT SHEET 92	AMR3396
3214 SLOT PANEL 92	ANG2611
3526 HEXAGON HEADED SCREW	BBA1051
9451 SCREW TERMINAL	VNE1949
SEMICONDUCTORS	
IC8901	TC74VHC00FT
Q8902	2SC4116
COILS AND FILTERS	
L8901	LCTAW221J3225
CAPACITORS	
C8902	CKSRYB104K25
C8901	CKSSYF104Z16
RESISTORS	
Other Resistors	RS1/16S###J
OTHERS	
CN8904 (46P CARD EDGE CONNECTOR)	AKP1252
CN8902 10P L-TYPE PLUG	KM200NA10L
CN8903 11P L-TYPE PLUG	KM200NA11L
CN8905 6P L-TYPE PLUG	KM200NA6L

Mark No.	Description	Part No.

VIDEO SLOT I/F ASSY

SEMICONDUCTORS

IC8952	24LC01B
Q8953	DTC124EUA
D8951, D8952	UDZS5.6B

COILS AND FILTERS

L8951	ATX1008

CAPACITORS

C8952	CEHAT470M16
C8953	CKSSYF104Z16

RESISTORS

Other Resistors	RS1/16S###J

OTHERS

CN8953 120P SOCKET	AKP1219
CN8954 184P PCI BUS SOCKET	AKP1251
CN8955 50P SOCKET	AKP1253
KN8951, KN8952 GROUND PLATE	ANK1664
CN8952 11P L-TYPE PLUG	KM200NA11L

KEY CONTROL ASSY

SEMICONDUCTORS

IC9001	PD5719A
Q9001	2SC4116
D9001-D9003, D9005-D9008	1SS302
D9004	1SS355

CAPACITORS

C9006-C9008	CCSRCH101J50
C9005	CEAT470M16
C9001-C9003	CKSRYB472K50
C9004	CKSSYF104Z16

RESISTORS

R9008	RAB4C182J
Other Resistors	RS1/16S###J

OTHERS

CN9002 8P FFC CONNECTOR	AKM1207
X9001 CERALOCK	ASS1162
CN9001 3P L-TYPE PLUG	KM200NA3L

LED OPT ASSY

SEMICONDUCTORS

Q9652	DTC143EUA
Q9051	HN1B04FU
Q9651	RN2901
D9051	S9561
D9652	SML-310MT
D9651	SML-311UT

CAPACITORS

C9652-C9655	CCSRCH101J50
C9054	CKSRYB103K50
C9052, C9055, C9056	CKSRYB105K10
C9051, C9053, C9651	CKSSYF104Z16

RESISTORS

Other Resistors	RS1/16S###J

Mark No.	Description	Part No.

IR RECEIVE ASSY

SEMICONDUCTORS

Q4901	2SC4116
D4902	1SS302
D4901	1SS355

CAPACITORS

C4905	CCSRCH101J50
C4901	CEAT470M16
C4903	CKSRYB102K50
C4907	CKSRYB103K50
C4902, C4904	CKSSYF104Z16

RESISTORS

Other Resistors	RS1/16S###J

SP TERMINAL L ASSY

SEMICONDUCTORS

IC9752	MM1522XU
IC9751	MM3012XN

COILS AND FILTERS

L9701, L9702	ATF1206

CAPACITORS

C9703, C9704	CCSRCH101J50
C9706, C9708-C9711	CCSRCH221J50
C9753, C9756	CEAT470M16
C9754	CKSRYB103K50
C9752, C9755	CKSRYB105K10
C9705	CKSRYB332K50
C9707	CKSRYF473Z50
C9751, C9757	CKSSYF104Z16

RESISTORS

R9703, R9704	RD1/2MMF100J
R9757, R9760	RS1/16S1001F
Other Resistors	RS1/16S###J

OTHERS

CN9701 2P SPEAKER TERMINAL	AKE1041
CN9702 6P PLUG	KM200NA6

SP TERMINAL R ASSY

COILS AND FILTERS

L9801, L9802	ATF1206

CAPACITORS

C9804, C9805	CCSRCH101J50
C9801, C9808-C9811	CCSRCH221J50
C9806	CKSRYB332K50
C9807	CKSRYF473Z50

RESISTORS

R9803, R9804	RD1/2MMF100J
Other Resistors	RS1/16S###J

OTHERS

CN9802 2P SPEAKER	AKE1041

COVER ASSY

This assembly has no service part.

Mark	No.	Description	Part No.

AV I/O I/F ASSY

OTHERS

	CN2101	120P PCI BUS SOCKET	AKP1220

DIGITAL VIDEO ASSY

[DIGITAL IF BLOCK]

COILS AND FILTERS

	F5001, F5002, F5004, F5005	ATF1194

RESISTORS

	R5101-R5115, R5131	RAB4C470J
	Other Resistors	RS1/16S###J

OTHERS

	CN5001	114P FFC CONNECTOR	AKM1216
	CN5002	PH CONNECTOR	AKM1249
	K5002-K5004, K5007	TEST PIN	AKX9002

[MODULE UCOM BLOCK]

SEMICONDUCTORS

	IC5206	24LC04B(I)SN
	IC5201	M30626FHPGP-P
	IC5205	PST3628UR
	IC5208	TC74VHC08FT
	IC5213	TC74VHC123AFT
	IC5214, IC5215	TC74VHC32FT
	IC5211, IC5212	TC74VHC541FT
	IC5209	TC7W126FU
	Q5201	2SJ461A
	D5207-D5212	1SS301
	D5217, D5218	1SS355
	D5201	SML-310LT

SWITCHES

	S5201	ASH1047

CAPACITORS

	C5213, C5225	ACH1357
	C5206, C5223, C5231, C5245-C5262	CKSRYB102K50
	C5264	CKSRYB102K50
	C5232	CKSRYB104K16
	C5263	CKSRYB104K25
	C5230	CKSRYB105K6R3
	C5205	CKSRYB472K50
	C5201-C5204, C5208, C5210-C5212	CKSSYF104Z16
	C5218, C5224, C5226, C5227	CKSSYF104Z16
	C5243, C5244	CKSSYF104Z16

RESISTORS

	R5209, R5211, R5212, R5235	RAB4C101J
	R5254, R5255, R5265, R5266	RAB4C101J
	R5205	RAB4C103J
	R5270, R5271	RAB4C472J
	R5256, R5257	RAB4C474J
	Other Resistors	RS1/16S###J

OTHERS

	CN5201	8P PLUG	AKM1225
	CN5202	PH CONNECTOR	AKM1242
	K5201	TEST PIN	AKX9002
⚠	X5201	(16MHz)	ASS1178

[PANEL FLASH BLOCK]

SEMICONDUCTORS

	IC5305	MBM29PL160BD-75PFTN
	IC5303	PST3612UR
	IC5301	PST3628UR
	IC5302	TC74VHC08FT
	Q5301	RN1901
	D5301-D5310	1SS302

CAPACITORS

	C5320	CCSRCH470J50
	C5304, C5307	CKSRYB102K50
	C5311, C5314	CKSRYB104K16
	C5303, C5306	CKSRYB472K50
	C5301, C5302, C5305, C5309, C5313	CKSSYF104Z16
	C5316	CKSSYF104Z16

RESISTORS

	R5317, R5318	RAB4C101J
	Other Resistors	RS1/16S###J

OTHERS

	CN5301	15P PLUG	AKM1232
	K5301	TEST PIN	AKX9002
⚠	X5302	(85MHz)	ASS1174
⚠	X5301	(60MHz)	ASS1176

[IC4 BLOCK]

SEMICONDUCTORS

	IC5401	PD5856A
	D5401	SML-310LT
	D5402	SML-310MT

COILS AND FILTERS

	F5401, F5403, F5409, F5410	ATF1194

CAPACITORS

	C5401, C5413, C5417, C5424 (100microF/16V)	ACH1396
	C5434, C5435	CKSRYB102K50
	C5402-C5412, C5414-C5416	CKSSYF104Z16
	C5418-C5423, C5425-C5431	CKSSYF104Z16

RESISTORS

	R5406, R5421	RAB4C101J
	R5408-R5413, R5415, R5416, R5419	RAB4C220J
	R5422	RAB4C220J
	R5405	RS1/16S5601F
	Other Resistors	RS1/16S###J

OTHERS

	K5401	TEST PIN	AKX9002

[ADDRESS CN BLOCK]

Other Resistors

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	CN5521	50P CONNECTOR	AKM1201
⚠	CN5501-CN5508	40P CONNECTOR	AKM1217
	CN5511	30P CONNECTOR	AKM1218

Mark	No.	Description	Part No.
		[DIGITAL DD CON BLOCK]	
		SEMICONDUCTORS	
⚠	IC5602		PQ05DZ11
⚠	IC5603		PQ09DZ11
	Q5601, Q5603		HN1C01FU
	Q5605		RN1901
	D5602, D5603, D5609, D5610		1SS355
	D5601		HZU2.2B
	D5604		UDZS5.1B
		CAPACITORS	
	C5601, C5603, C5607, C5614, C5616 (100microF/16V)		ACH1394
	C5602, C5604, C5615, C5617		CKSRYB103K50
	C5605, C5606, C5610		CKSSYF104Z16
		RESISTORS	
	R5601		ACN1162
	R5627		ACN1168
	Other Resistors		RS1/16S###J
		OTHERS	
⚠	CN5602 PH CONNECTOR 7P		AKM1246
⚠	CN5601 PH CONNECTOR 11P		AKM1250

VIDEO SLOT1 ASSY

Mark	No.	Description	Part No.
		[INPUT REG BLOCK]	
		SEMICONDUCTORS	
	IC7804		BA4558F-HT
⚠	IC8104		PQ015YZ01ZP
⚠	IC8101		PQ05DZ11
⚠	IC8102		PQ09DZ11
⚠	IC8103, IC8105		PQ3DZ13
	IC7803		TC4052BFT
	IC7801, IC7802		TK15420M
	Q7805		2SC4116
	Q7803, Q7804		DTC124EUA
	Q7806		HN1C01FU
	D7801-D7804, D7806-D7808		1SS302
	D7811-D7814, D8106, D8107		1SS302
	D7815, D8101-D8105		1SS355
	D7809, D7810		UDZS5.6B
		COILS AND FILTERS	
	F8101-F8103		ATF1194
		SWITCHES	
	S7801		ASH1047
		CAPACITORS	
	C7818, C7819		CCSRCH220J50
	C7850		CEHAT100M50
	C8105, C8114, C8125, C8130		CEHAT101M10
	C8112		CEHAT101M16
	C7808		CEHAT220M50
	C8101, C8131		CEHAT221M16
	C8122		CEHAT221M6R3
	C7801, C7847, C7848, C8107, C8109		CEHAT470M16
	C8116		CEHAT470M16
	C7806		CEHAT471M16
	C7821, C7825, C7835, C7840, C7851		CEHAT4R7M50
	C7827, C7828, C7842, C7843		CKSRYB102K50
	C7803, C7812, C7814, C7815		CKSRYB103K50
	C7813, C7816, C7817		CKSRYB105K10
	C7823, C7824, C7839, C7844		CKSRYB221K50
	C7802, C7807, C7820, C7830		CKSSYF104Z16
	C8102-C8104, C8106, C8108		CKSSYF104Z16
	C8110, C8111, C8113, C8115, C8121		CKSSYF104Z16
	C8124, C8126-C8129, C8132		CKSSYF104Z16
		RESISTORS	
	R7845-R7848		RS1/10S151J
	R8113		RS1/16S1001F
	R7840, R7841		RS1/16S2201F
	R8112		RS1/16S5100F
	R7808, R7809, R7822, R7823, R7834		RS1/16S75R0F
	R7836, R7837		RS1/16S75R0F
	R8106, R8118		RS1MMF100J
	R8108, R8119-R8121		RS1MMF390J
	Other Resistors		RS1/16S###J
		OTHERS	
	CN7801 4P DIN SOCKET		AKP1217
	JA7804 BNC SOCKET 5P		AKX1059
	JA7803 BNC SOCKET 2P		AKX1060
	JA7801, JA7802 2P PIN JACK		DKB1031
	7801, 7802 SCREW TERMINAL		VNE1949
		[IC1 (Y/C) BLOCK	
		SEMICONDUCTORS	
	IC6257		24LC01B
	IC6255		PD0278A
	IC6251-IC6254		TC7SHU04FU
	IC6256		TC7W126FU
	Q6255		2SJ461A
	Q6258		DTA124EUA
	Q6251, Q6253		HN1A01FU
	Q6256, Q6257		HN1B04FU
		COILS AND FILTERS	
	F6251-F6254		ATF1194
	L6251, L6253		LCTAW120J2520
	L6252, L6254		LCTAW150J2520
	L6257		LCTAW220J2520
	L6255, L6256		LCTAW330J2520
		CAPACITORS	
	C6305, C6306, C6312, C6313		CCSRCH120J50
	C6272, C6274, C6288, C6290		CCSRCH220J50
	C6249, C6250		CCSRCH471J50
	C6273, C6289		CCSRCH680J50
	C6295, C6321, C6322, C6327-C6330		CEHAT101M10
	C6324		CEHAT470M16
	C6297		CKSQYB225K10
	C6258, C6260		CKSRYB102K50
	C6265, C6268, C6282, C6285		CKSRYB104K16
	C6299, C6300, C6309, C6310, C6316		CKSRYB104K16
	C6323		CKSRYB104K16
	C6201, C6301, C6314		CKSRYB105K10
	C6251, C6253-C6257, C6259		CKSSYF104Z16
	C6261, C6262, C6267, C6269-C6271		CKSSYF104Z16
	C6275-C6279, C6284, C6286, C6287		CKSSYF104Z16
	C6291-C6294, C6296, C6298		CKSSYF104Z16
	C6302-C6304, C6307, C6308, C6311		CKSSYF104Z16
	C6315, C6317-C6320, C6325, C6326		CKSSYF104Z16
	C6252		DCH1165

Mark No.	Description	Part No.
	RESISTORS	
	R6251-R6254, R6271, R6275, R6276	RAB4CQ100J
	R6329-R6331	RAB4CQ103J
A	R6321, R6322, R6334, R6335, R6339	RS1/16S1000F
	R6273, R6289	RS1/16S1001F
	R6305, R6314	RS1/16S1101F
	R6291, R6309, R6313	RS1/16S1301F
	R6323	RS1/16S2400F
	R6277, R6288	RS1/16S2701F
	R6264, R6281	RS1/16S4700F
	R6306, R6307	RS1/16S8201F
	Other Resistors	RS1/16S###J
	OTHERS	
B	X6251 (27MHz)	ASS1175
	[IC1 (CVBS) BLOCK]	
	SEMICONDUCTORS	
	IC6106	HY57V161610DTC-8
	IC6107	PD0278A
	IC6102-IC6105	TC7SHU04FU
	Q6103	DTC124EUA
	Q6101, Q6102	HN1A01FU
	Q6107	HN1B04FU
C		
	COILS AND FILTERS	
	F6102, F6103, F6105, F6106	ATF1194
	L6101, L6103	LCTAW120J2520
	L6102, L6104	LCTAW150J2520
	L6108	LCTAW220J2520
	L6106	LCTAW330J2520
	CAPACITORS	
	C6171, C6172	CCSRCH120J50
	C6126, C6128, C6142, C6144	CCSRCH220J50
	C6127, C6143	CCSRCH680J50
	C6102, C6106, C6115, C6149, C6155	CEHAT101M10
D	C6182, C6184, C6186	CEHAT101M10
	C6105	CEHAT470M16
	C6151	CKSQYB225K10
	C6112, C6114	CKSRYB102K50
	C6119, C6122, C6136, C6139	CKSRYB104K16
	C6153, C6154, C6168, C6177	CKSRYB104K16
	C6101, C6175, C6190	CKSRYB105K10
	C6103, C6104, C6107-C6111, C6113	CKSSYF104Z16
	C6116, C6121, C6123-C6125	CKSSYF104Z16
	C6129-C6133, C6138, C6140, C6141	CKSSYF104Z16
	C6145-C6148, C6150, C6152	CKSSYF104Z16
E		
	C6156-C6161, C6166, C6167, C6170	CKSSYF104Z16
	C6173, C6174, C6176, C6178-C6181	CKSSYF104Z16
	C6183	CKSSYF104Z16
	RESISTORS	
	R6163, R6166, R6178, R6180	RAB4CQ0R0J
	R6101, R6104-R6106, R6120	RAB4CQ100J
	R6124, R6125	RAB4CQ100J
	R6153-R6155	RAB4CQ103J
	R6210-R6213	RAB4CQ121J
	R6146, R6159, R6184	RAB4CQ330J
F	R6156, R6160, R6161, R6194, R6195	RS1/16S1000F
	R6122, R6140	RS1/16S1001F
	R6175	RS1/16S1101F

Mark No.	Description	Part No.
	R6147, R6174	RS1/16S1301F
	R6196	RS1/16S2400F
	R6126, R6138	RS1/16S2701F
	R6113, R6129	RS1/16S4700F
	R6167, R6168	RS1/16S8201F
	Other Resistors	RS1/16S###J
	[SIGNAL SW BLOCK]	
	SEMICONDUCTORS	
	IC7902	AN5870SB
	IC7908	TC74VHC08FT
	IC7907	TC74VHC126FT
	IC7905	TC74VHCT541AFT
	Q7903, Q7905, Q7910	DTC124EUA
	Q7913, Q7916	HN1A01FU
	Q7901, Q7906, Q7911, Q7915	HN1C01FU
	Q7914	RN1902
	CAPACITORS	
	C7923, C7925, C7926	CEHANP470M10
	C7905	CEHAT101M10
	C7902, C7928, C7929, C7931	CEHAT470M16
	C7908, C7912, C7917	CEHAT471M16
	C7907, C7911, C7916	CKSRYB103K50
	C7924, C7927, C7930	CKSRYB105K10
	C7906, C7909, C7910, C7914, C7918	CKSRYF103Z50
	C7903, C7904, C7913, C7915	CKSSYF104Z16
	C7920-C7922, C7932, C7943	CKSSYF104Z16
	RESISTORS	
	R7902, R7907, R7910, R7914	RAB4CQ0R0J
	R7917, R7918, R7935	RAB4CQ0R0J
	R7903	RAB4CQ103J
	R7905, R7909, R7912	RS1/16S27R0F
	R8040-R8042	RS1/16S75R0F
	Other Resistors	RS1/16S###J
	OTHERS	
	3201 SCREW	ABA1295
	3001 RIVET	AEP-211
	3003 PROTECT SHEET 262	AMR3400
	3002 SLOT PANEL 262(A)	ANG2653
	3203 SCREW	BMZ30P080FZK
	3202 SCREW	BPZ30P080FZK

VIDEO SLOT 2 ASSY

	SEMICONDUCTORS	
	IC7804	BA4558F-HT
⚠	IC8104	PQ015YZ01ZP
⚠	IC8101	PQ05DZ11
⚠	IC8102	PQ09DZ11
⚠	IC8103, IC8105	PQ3DZ13
	IC7803	TC4052BFT
	IC7801, IC7802	TK15420M
	Q7805	2SC4116
	Q7803, Q7804	DTC124EUA
	Q7806	HN1C01FU
	D7801-D7804, D7806-D7814	1SS302
	D8106, D8107	1SS302
	D7815, D8101-D8105	1SS355
	COILS AND FILTERS	
	F8101-F8103	ATF1194

Mark No.	Description	Part No.
CAPACITORS		
C7850		CEHAT100M50
C8105, C8114, C8125, C8130		CEHAT101M10
C8112		CEHAT101M16
C7808		CEHAT220M50
C8101, C8131		CEHAT221M16
C8122		CEHAT221M6R3
C7801, C7847, C7848, C8107, C8109		CEHAT470M16
C8116		CEHAT470M16
C7806		CEHAT471M16
C7821, C7825, C7835, C7840, C7851		CEHAT4R7M50
C7853, C7855		CEHAT4R7M50
C7827, C7828, C7842, C7843		CKSRYB102K50
C7857, C7858		CKSRYB102K50
C7803, C7812, C7814, C7815		CKSRYB103K50
C7813, C7816, C7817		CKSRYB105K10
C7823, C7824, C7839, C7844, C7854		CKSRYB221K50
C7859		CKSRYB221K50
C7802, C7807, C7820, C7830		CKSSYF104Z16
C8102-C8104, C8106, C8108		CKSSYF104Z16
C8110, C8111, C8113, C8115, C8121		CKSSYF104Z16
C8124, C8126-C8129, C8132		CKSSYF104Z16
RESISTORS		
R8113		RS1/16S1001F
R8112		RS1/16S5100F
R7808, R7809, R7822, R7823, R7834		RS1/16S75R0F
R7836, R7837		RS1/16S75R0F
R8106, R8118		RS1MMF100J
R8108, R8119-R8121		RS1MMF390J
Other Resistors		RS1/16S###J
OTHERS		
CN7801 4P DIN SOCKET		AKP1217
JA7801-JA7803 2P PIN JACK		DKB1031
JA7804 2P PIN JACK		VKB1134
JA7805 3P PIN JACK		VKB1150
7801, 7802 SCREW TERMINAL		VNE1949
[IC1 (Y/C) BLOCK]		
SEMICONDUCTORS		
IC6257		24LC01B
IC6255		PD0278A
IC6251-IC6254		TC7SHU04FU
IC6256		TC7W126FU
Q6255		2SJ461A
Q6258		DTA124EUA
Q6251, Q6253		HN1A01FU
Q6256, Q6257		HN1B04FU
COILS AND FILTERS		
F6251-F6254		ATF1194
L6251, L6253		LCTAW120J2520
L6252, L6254		LCTAW150J2520
L6257		LCTAW220J2520
L6255, L6256		LCTAW330J2520
CAPACITORS		
C6305, C6306, C6312, C6313		CCSRCH120J50
C6272, C6274, C6288, C6290		CCSRCH220J50
C6249, C6250		CCSRCH471J50
C6273, C6289		CCSRCH680J50
C6295, C6321, C6322, C6327-C6330		CEHAT101M10

Mark No.	Description	Part No.
C6324		CEHAT470M16
C6297		CKSQYB225K10
C6258, C6260		CKSRYB102K50
C6265, C6268, C6282, C6285		CKSRYB104K16
C6299, C6300, C6309, C6310, C6316		CKSRYB104K16
C6323		CKSRYB104K16
C6201, C6301, C6314		CKSRYB105K10
C6251, C6253-C6257, C6259		CKSSYF104Z16
C6261, C6262, C6267, C6269-C6271		CKSSYF104Z16
C6275-C6279, C6284, C6286, C6287		CKSSYF104Z16
C6291-C6294, C6296, C6298		CKSSYF104Z16
C6302-C6304, C6307, C6308, C6311		CKSSYF104Z16
C6315, C6317-C6320, C6325, C6326		CKSSYF104Z16
C6252		DCH1165
RESISTORS		
R6251-R6254, R6271, R6275, R6276		RAB4CQ100J
R6329-R6331		RAB4CQ103J
R6321, R6322, R6334, R6335, R6339		RS1/16S1000F
R6273, R6289		RS1/16S1001F
R6305, R6314		RS1/16S1101F
R6291, R6309, R6313		RS1/16S1301F
R6323		RS1/16S2400F
R6277, R6288		RS1/16S2701F
R6264, R6281		RS1/16S4700F
R6306, R6307		RS1/16S8201F
Other Resistors		RS1/16S###J
OTHERS		
X6251 (27MHz)		ASS1175
[IC1 (CVBS) BLOCK]		
SEMICONDUCTORS		
IC6106		HY57V161610DTC-8
IC6107		PD0278A
IC6102-IC6105		TC7SHU04FU
Q6103		DTC124EUA
Q6101, Q6102		HN1A01FU
Q6107		HN1B04FU
COILS AND FILTERS		
F6102, F6103, F6105, F6106		ATF1194
L6101, L6103		LCTAW120J2520
L6102, L6104		LCTAW150J2520
L6108		LCTAW220J2520
L6106		LCTAW330J2520
CAPACITORS		
C6171, C6172		CCSRCH120J50
C6126, C6128, C6142, C6144		CCSRCH220J50
C6127, C6143		CCSRCH680J50
C6102, C6106, C6115, C6149, C6155		CEHAT101M10
C6182, C6184, C6186		CEHAT101M10
C6105		CEHAT470M16
C6151		CKSQYB225K10
C6112, C6114		CKSRYB102K50
C6119, C6122, C6136, C6139		CKSRYB104K16
C6153, C6154, C6168, C6177		CKSRYB104K16
C6101, C6175, C6190		CKSRYB105K10
C6103, C6104, C6107-C6111, C6113		CKSSYF104Z16
C6116, C6121, C6123-C6125		CKSSYF104Z16
C6129-C6133, C6138, C6140, C6141		CKSSYF104Z16
C6145-C6148, C6150, C6152		CKSSYF104Z16

Mark	No.	Description	Part No.
	C6156-C6161, C6166, C6167, C6170		CKSSYF104Z16
	C6173, C6174, C6176, C6178-C6181		CKSSYF104Z16
A	C6183		CKSSYF104Z16
	RESISTORS		
	R6163, R6166, R6178, R6180		RAB4CQ0R0J
	R6101, R6104-R6106, R6120		RAB4CQ100J
	R6124, R6125		RAB4CQ100J
	R6153-R6155		RAB4CQ103J
	R6210-R6213		RAB4CQ121J
	R6146, R6159, R6184		RAB4CQ330J
	R6156, R6160, R6161, R6194, R6195		RS1/16S1000F
	R6122, R6140		RS1/16S1001F
	R6175		RS1/16S1101F
B	R6147, R6174		RS1/16S1301F
	R6196		RS1/16S2400F
	R6126, R6138		RS1/16S2701F
	R6113, R6129		RS1/16S4700F
	R6167, R6168		RS1/16S8201F
	Other Resistors		RS1/16S###J
	[SINGLE SW BLOCK]		
	SEMICONDUCTORS		
	IC7902		AN5870SB
C	IC7908		TC74VHC08FT
	IC7907		TC74VHC126FT
	IC7905		TC74VHCT541AFT
	Q7903, Q7905, Q7910		DTC124EUA
	Q7913, Q7916		HN1A01FU
	Q7901, Q7906, Q7911, Q7915		HN1C01FU
	Q7914		RN1902
	CAPACITORS		
	C7923, C7925, C7926		CEHANP470M10
	C7905		CEHAT101M10
	C7902, C7928, C7929, C7931		CEHAT470M16
D	C7908, C7912, C7917		CEHAT471M16
	C7907, C7911, C7916		CKSRYB103K50
	C7924, C7927, C7930		CKSRYB105K10
	C7906, C7909, C7910, C7914, C7918		CKSRYF103Z50
	C7903, C7904, C7913, C7915		CKSSYF104Z16
	C7920-C7922, C7932, C7943		CKSSYF104Z16
	RESISTORS		
	R7902, R7907, R7910, R7914		RAB4CQ0R0J
	R7917, R7918, R7935		RAB4CQ0R0J
	R7903		RAB4CQ103J
	R7905, R7909, R7912		RS1/16S27R0F
E	R8040-R8042		RS1/16S75R0F
	Other Resistors		RS1/16S###J
	OTHERS		
	3201 SCREW		ABA1295
	3001 REVET		AEP-211
	3003 PROTECT SHEET 262		AMR3400
	3002 SLOT PANEL 262(B)		ANG2654
	3202 SCREW		BPZ30P080FZK

F

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
DIGITAL VIDEO Assy	➡	Refer to the "7.1.6 BACKUP THE ADJUSTMENT VALUES FOR THE MAIN UNIT."
50 X DRIVE Assy	➡	No adjustment required
50 Y DRIVE Assy	➡	No adjustment required
AV I/O Assy	➡	No adjustment required
RGB Assy	➡	No adjustment required
VIDEO SLOT Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required
Service Panel	➡	VSUS and VOFS voltage setup, Panel WB check

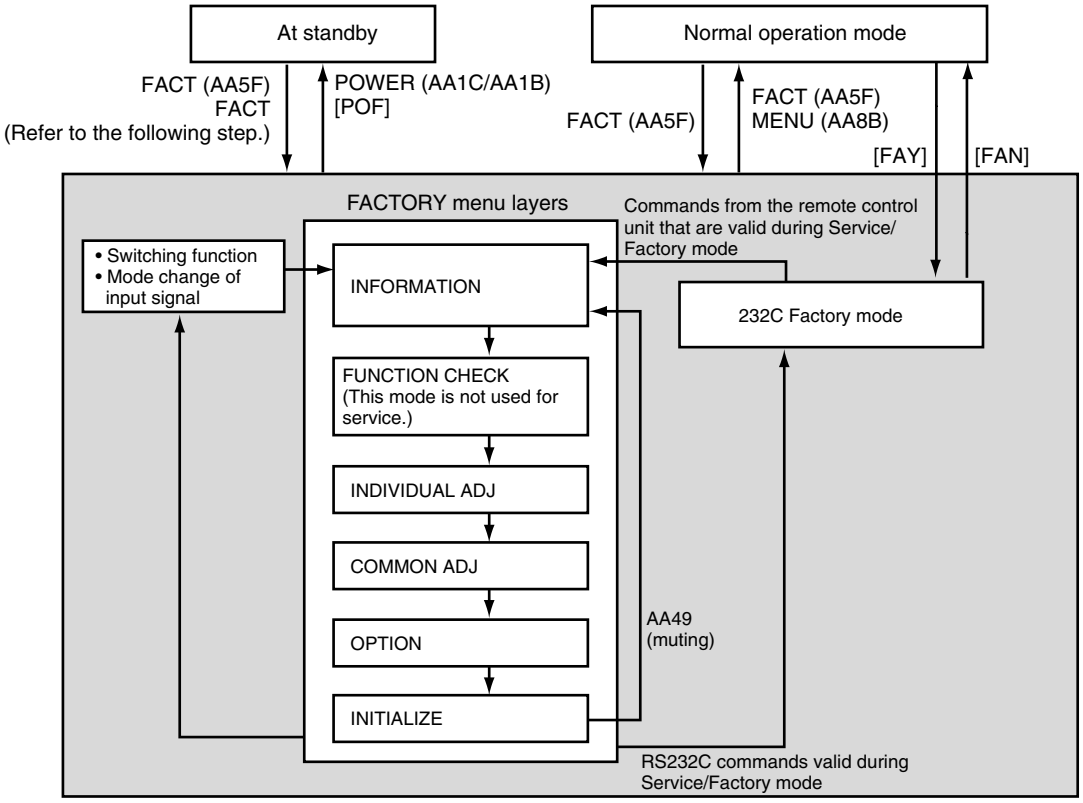
■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
DIGITAL VIDEO Assy	➡	No adjustment required
50 X DRIVE Assy	➡	No adjustment required
50 Y DRIVE Assy	➡	No adjustment required
AV I/O Assy	➡	Replacement and repair of IC7610 and IC8705 are impossible.
RGB Assy	➡	Replacement and repair of IC6001, IC6401, IC6403, IC6601, IC6602 and IC7205 are impossible.
VIDEO SLOT Assy	➡	Replacement and repair of IC6107, IC6255, IC6257 and IC7902 are impossible.
Other assemblies	➡	No adjustment required

6.2 SERVICE FACTORY MODE

Commands in Service/Factory mode must be issued using the remote control unit supplied with the Plasma Display.

State Transition Diagram



6.3 HOW TO ENTER FACTORY MODE

For adjustments, it is necessary to enter Service/Factory mode. There are two ways to enter Service/Factory mode: by using the remote control unit, or by using RS232C commands from your PC.

When the unit is in Standby (STB) Mode

• Please refer to the technical document (Service Knowhow)

When the power is on

No.	Method	Procedures
1	Remote control unit	When the conventional Service/Factory code (AA5F) is sent, the unit will enter Service/Factory mode.
2	PC	Connect your PC via its RS232C port, and send the FAY command.

■ Operation when Service/Factory mode is entered

● Functions whose settings are set to OFF

The settings of the following functions are set to OFF when Service/Factory mode is entered (including when this mode is entered by receiving the FAY command):

- SPLIT (The display will become that of the main input.)
- STILL
- MASK CONTROL
- ORBITER
- POINT ZOOM

● User's setting data

User setting data are set as follows:

- Although user's adjustment data for video/audio adjustment and various adjustment are stored in memory, they are not reflected on the display.
- Although user's adjustment data for display are stored in memory, display adjustment data are reset to the default settings.
- Screen size and sound volume reflect user settings.
- The COLOR DECODING and SIGNAL FORMAT settings are reset to the default values.

● Setting data for Integrator mode

Setting data for Integrator mode will change as follows:

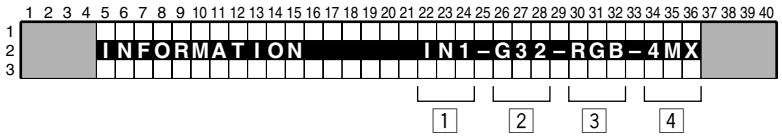
- Although video/audio adjustment data and various data for Integrator mode are stored in memory, they are not reflected on the display.
- Although adjustment data for display in Integrator mode are stored in memory, display adjustment data are reset to the default settings.

■ Functions of the keys on the remote control unit in Service/Factory mode

SR Function	Main Function	Description
MUTING	Switching main items	For shifting to the next (top) main item
▼ (DOWN)	Switching subitems	For shifting to the next (downward) subitem
▲ (UP)	Switching subitems	For shifting to the previous (upward) subitem
◄ (LEFT)	Increasing adjustment value	For increasing adjustment value
► (RIGHT)	Decreasing adjustment value	For decreasing adjustment value
SET	Shifting layers	For shifting to lower or upper layer
INPUT ∗	Switching inputs	For switching the input to ∗
STANDBY/ON	POWER OFF	For turning off the power
FACTORY	Service/Factory OFF	For setting Service/Factory mode to OFF
MENU	Service/Factory OFF	For setting Service/Factory mode to OFF
POINT ZOOM	Matrix change	RGB →YCBR (Component1) → YPBR (Component2)
SPLIT	Main screen/Sub screen change	MAIN → SUB

Main-item indications

Four parameters are displayed:



1 Input function

When there is not a video card

Input Functions	On-Screen Display
IN1, IN2	IN1, IN2

When there is a video card

Input Functions	On-Screen Display
IN1 to IN5	IN1 to IN5

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

When there is not a video card

Color System and Signal Type	On-Screen Display
RGB	RGB
Digital video signal	DIG

When there is a video card

Color System and Signal Type		On-Screen Display
NTSC	Composite input/ S-connector input	NTV/NTS
PAL		PLV/PLS
SECAM		SCV/SCS
4.43NTSC		4NV/4NS
PAL M		PMV/PMS
PAL N		PNV/PNS
BLACK/WHITE		BWV/BWS
Y / Cb / Cr		CBR
Y / Pb / Pr		PBR
RGB		RGB
Digital video signal		DIG

4 Option (Destination, etc.)

Options	On-Screen Display
CMX/MXE	4MX

● SIG-Mode Table

The signal mode is displayed in three characters:

First character: Resolution of the input signal (numerics for the video signals, and alphabetics for the PC signals)

Second character: Grouping of the vertical frequencies

2nd Character	Reference Vertical Frequency	Area	Remarks
–	–	– 20.0	No signal
B		20.0 to 28.0	
C		28.0 to 45.0	
1	50	45.0 to 54.5	
2	56	54.5 to 58.2	
3	60	58.2 to 63.0	
4	66	63.0 to 68.0	
5	70	68.0 to 73.4	
6	For interpolation of 72-Hz	73.4 to 73.9	For distinguishing between 70-Hz or 75-Hz area
7	75	73.9 to 80.0	
8	85	80.0 to 88.5	
?	–	91.5 –	Out of range

Third character: Selection of the screen size by the user is displayed.
(○: available, ×: not available)

3rd Character	Description on GUI	VIDEO	PC
0	DOT BY DOT	×	○
1	4 : 3	○	○
2	FULL (FULL1080i)	○	○
3	ZOOM	○	×
4	WIDE	○	×
6	CINEMA	○	×
8	FULL (FULL1035i)	○	×
9 *	UNDERSCAN	○	×
:	PARTIAL	×	○

*** This is displayed only when UNDERSCAN has been set before Service/Factory mode is entered.**
In Service/Factory mode, changing from other screen sizes to UNDERSCAN cannot be performed.

● SIG-Mode Table

SIG-Mode table for video signals

SIG-Mode	Signal Type	Vertical Freq. fv (Hz)	Horizontal Freq. fh (kHz)	Dot Clock (MHz)	Remarks
13*	SDTV • 525i	60.000	15.734	13.5	
21*	SDTV • 625i	50.000	15.625	13.5	
33*	SDTV • 525p	60.000	31.469	27.000	
41*	HDTV • 1125i	50.000	28.125	74.250	
43*		60.000	33.750	74.250	
51*	SDTV • 625p	50.000	31.250	27.000	
61*	HDTV • 750p	50.000	37.500	74.250	
63*		60.000	45.000	74.250	
7B*	HDTV • 1125p	25.000	28.125	74.250	Use as OUT OF RANGE
7C*		30.000	33.750	74.250	Use as OUT OF RANGE
71*		50.000	56.250	148.500	
73*		60.000	67.500	148.500	
81*	HDTV • 1250p	50.000	62.500	148.500	
91*	288p	50.000	15.625	27.0/54.0	Use as OUT OF RANGE
93*	288p	60.000	15.750	27.0/54.0	Use as OUT OF RANGE

***: Represents the current screen-size selected.**

SIG-Mode table for PC signals

SIG-Mode	Signal Type	Vertical Freq. fv (Hz)	Horizontal Freq. fh (kHz)	Dot Clock (MHz)	Remarks
A2*	640 × 400	56.422	24.825	21.052	Former 720 × 400
A5*	720 × 400	70.087	31.469	28.322	Former 640 × 400
A8*	720 × 400	85.050	37.861	35.438	New
B1*	640 × 480	49.673	24.688	19.750	640 × 480 For rescan (48/50Hz)
B3*		59.940	31.469	25.175	
B4*		66.666	35.000	30.240	
B6*		72.809	37.861	31.500	
B7*		75.000	37.500	31.500	
B8*		85.000	43.300	36.000	
C1*	848 × 480	49.540	24.621	26.000	848 × 480 For rescan (48/50Hz)
C3*		60.000	31.020	33.750	
D2*	800 × 600	56.250	35.158	36.000	
D3*		60.317	37.879	40.000	
D6*		72.188	48.077	50.000	
D7*		75.000	46.875	49.500	
D8*		85.061	53.674	56.250	
E7*	832 × 624	74.550	49.725	57.283	
F1*	1024 × 768	48.003	38.690	52.000	1024 × 768 For rescan (48/50Hz)
F3*		60.004	48.363	65.000	
F5*		70.069	56.476	75.000	
F7*		75.029	60.023	78.750	
F8*		84.997	68.677	94.500	
G1*	1280 × 768	48.014	38.507	65.000	1280 × 768 For rescan (48/50Hz)
G2*		56.250	45.113	76.150	
G3*		59.870	47.776	79.500	
G5*		69.843	56.014	95.000	
H3*	1152 × 864	60.000	53.700	79.369	
H6*		72.000	64.900	99.686	
H7*		75.000	67.500	108.000	
I7*	1152 × 870	75.061	68.681	100.300	
J4*	1152 × 900	65.950	61.800	92.940	
J7*		76.050	71.710	105.561	
K3*	1280 × 960	60.000	60.000	108.000	
L3*	1280 × 1024	60.020	63.981	108.000	
L7*		75.025	79.976	135.000	
L8*		85.024	91.146	157.500	
M3*	1400 × 1050	59.978	65.317	121.750	
M7*	1400 × 1050	74.867	82.278	156.000	
M8*	1400 × 1050	84.960	93.881	(179.500)	
N3*	1600 × 1200	60.000	75.000	162.000	
N4*		65.000	81.250	153.563	
N5*		70.000	87.500	153.563	
N7*		75.000	93.750	151.875	
N8*		85.000	106.250	157.781	
O3*	1280 × 720	59.943	44.718	74.410	

*** : Represents the current screen-size selected.**

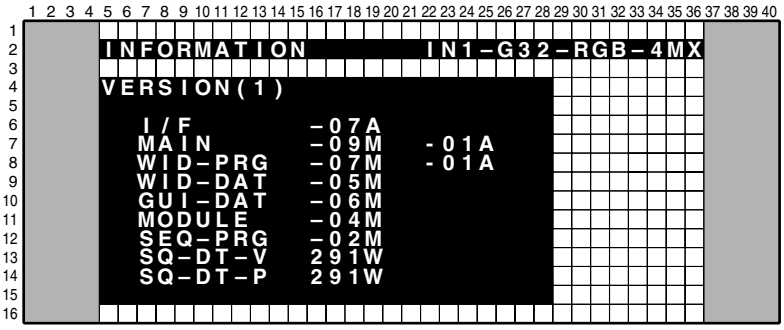
INFORMATION mode

Select the main item "INFORMATION" using the MUTE key then select the subitems shown in the table below using the ▲ or ▼ key.

● Operation items

No.	Function / Display	Content	232C Command
1	VERSION (1)	The flash memory versions for each device are displayed (1)	GS1
2	VERSION (2)	The type of video card inserted in the slot is displayed:	
3	SERIAL	For displaying the serial number of the product	GNP/ GST
4	PANEL PD	Power-down and its time of occurrence are displayed. The values can be cleared.	GPD
5	PANEL SD	Shutdown and its time of occurrence are displayed. The values can be cleared.	GNG
6	TEMPERATURE	Information on temperature is displayed.	GS2/GST
7	HOUR METER	Cumulative power-on time is displayed. The value can be cleared.	GS2
8	PULSE METER	The pulse meter values at each block are displayed. The values can be cleared.	GPM
9	P ON COUNTER	The number of times the power was turned on is displayed. The value can be cleared.	GPC
10	BACKUP EEPROM	The status of the backup data for the module microcomputer is displayed and updated.	GS2

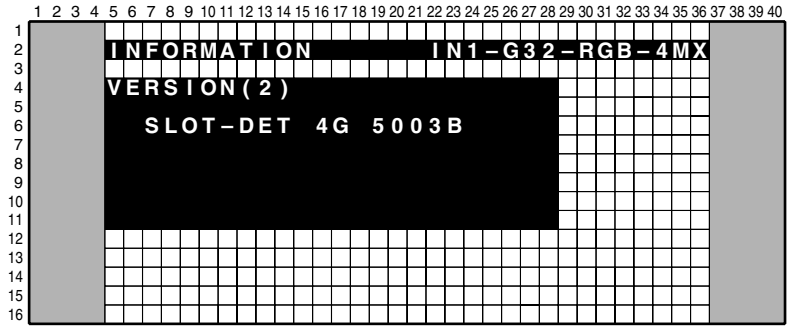
1. VERSION (1)



The flash memory versions for each device are displayed.

On-Screen Display	Flash memory of Device
I / F	User IF microcomputer
MAIN	Main microcomputer
WID–PRG	Program for IC3, Boot program for IC3
WID–DAT	Extension Engin data for IC3
GUI-PRG	GUI data for IC3
MODULE	Module microcomputer
SEQ–PRG	Program for IC4
SQ–DT–V	Sequence data for IC4 (for VIDEO)
SQ–DT–P	Sequence data for IC4 (for PC)

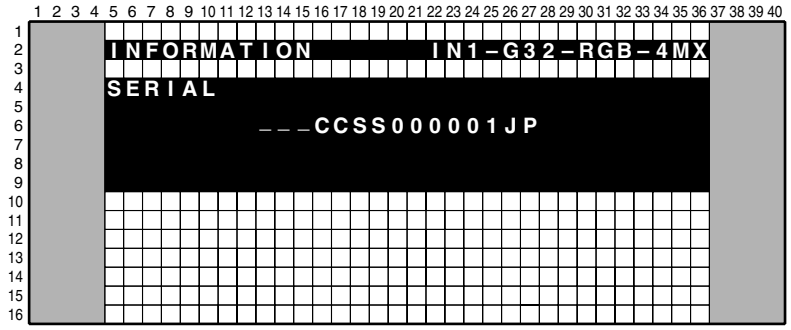
2. VERSION (2)



The type of video card inserted in the slot is displayed:

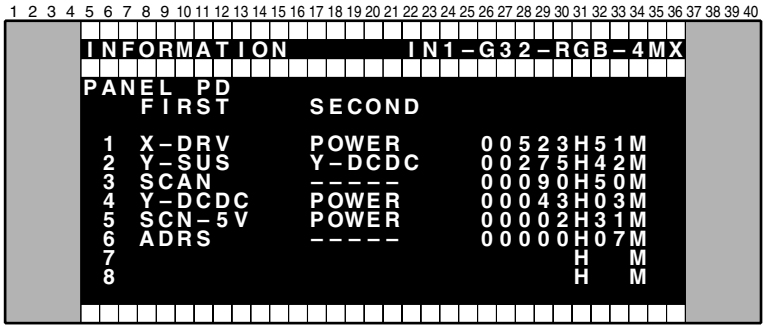
Device	Name Indication	Type of video card	Remarks
SLOT-DET	SLOT-DET	(No indication)	No card inserted
		4G 5003B	When the Pioneer PDA-5003 Standard Video Card is inserted.
		4G 5004R	When the Pioneer PDA-5004 Standard Video Card is inserted.
		3G TYPE ∗	When a PDP-503CMX-based OEM video card is inserted ∗ = A to H
		4G TYPE ∗	When a PDP-504CMX-based OEM video card is inserted ∗ = A to J

3. SERIAL



The serial number of the product is displayed.

4. PANEL PD



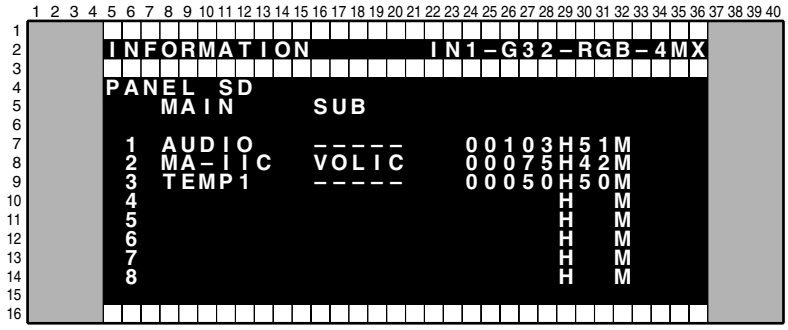
The log of the past eight power-downs is displayed. Power-down points (first and second) and the hour meter value when the power-down was generated are displayed, with the latest power-down data at the top.
The meanings of indications for power-down points are shown in the table below.

• Power-down information

Type of Power-down	On-Screen Display	Type of Power-down	On-Screen Display
No corresponding item	- - - - -	Power-down of the Y-SUS system	Y-SUS
Power-down of the main power supply system	POWER	Power-down of the address system	ADRS
Power-down of the scanning system	SCAN	Power-down of the X-DRIVE circuitry	X-DRV
Power-down in the path between the scanning system and 5-V power supply	SCN-5V	Power-down of the X-DC/DC converter	X-DCDC
Power-down of the Y-Drive system	Y-DRV	Power-down of the X-SUS system	X-SUS
Power-down of the Y-DC/DC converter	Y-DCDC	Power-down of the driving IC power supply system	D-DCDC
PD which cannot be specified	UNKNOWN		

*1: If an activated protection circuit could not be identified after the power-down, it is treated as an unidentifiable power-down (UNKNOWN).

5. PANEL SD



The log of the past eight shutdowns is displayed. Shutdown points and the hour meter value when the shutdown was generated are displayed, with the latest shutdown data at the top.
The meanings of indications for shutdown points are shown in the table below.

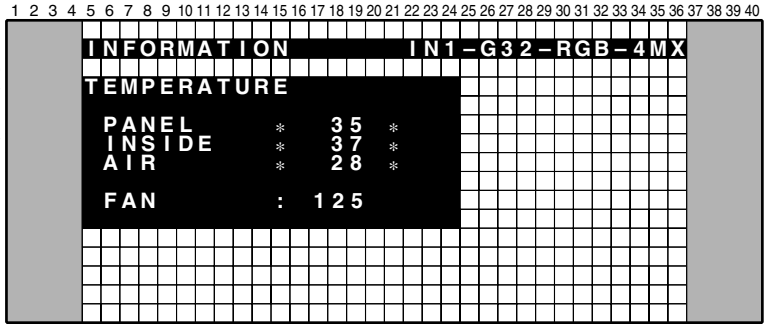
• Panel shutdown information

No.	Type of Shutdown	On-Screen Display (MAIN)	Subcategory
1	Abnormality in IC4 communication	IC4	
2	Abnormality in module microcomputer IIC communication	MD-IIC	Exists.
3	DIGITAL-DCDC power decrease	RST2	
4	Abnormality in panel temperature	TEMP1	
5	Short-circuiting of the speakers	AUDIO	
6	Abnormality in module microcomputer communication	MODULE	
7	Abnormality in three-wire serial communication of the main microcomputer	MA-SRL	Exists.
8	Abnormality in main microcomputer IIC communication	MA-IIC	Exists.
9	Abnormality in main microcomputer communication	MAIN	
10	FAN stopped	FAN	
11	Abnormality in unit temperature	TEMP	Exists.
12	Abnormality in the ASIC power on the main microcomputer side	M-DCDC	
13	Other failures	ETC	Exists.

• Subcategory information

No.	Type of Shutdown	Subcategory
2	MD-IIC	EEPROM4K, EROM2K
7	MA-SRL	IF microcomputer, IC2, IC3
8	MA-IIC	MA-EEP, IC1-V, IC1-Y, AD-M, AD-S, SL-EEP, IC6/1, IC6/2, VOLIC
11	TEMP	INSIDE/AIR (INSIDE = TEMP2/AIR =TEMP3)
13	ETC	RLS, VCC-D1, VCC-D2

6. TEMPERATURE

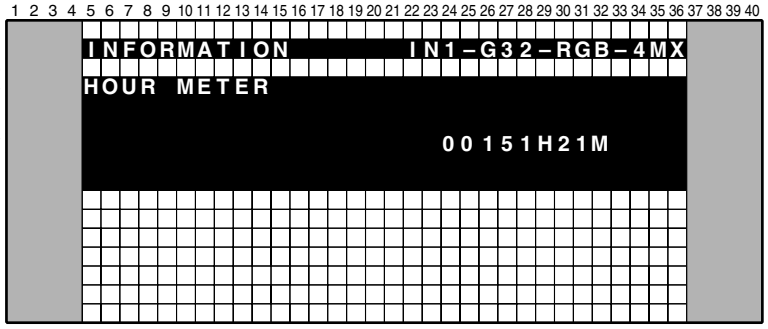


Data from each temperature sensor and the fan output value are displayed:

- Temperature sensors [°C]
  PANEL: Sensor temperature of a panel part (Reference value)
  INSIDE: Temperature inside the unit (Reference value)
  AIR: Ambient temperature around the unit (Reference value)
- Fan output: Fan output data

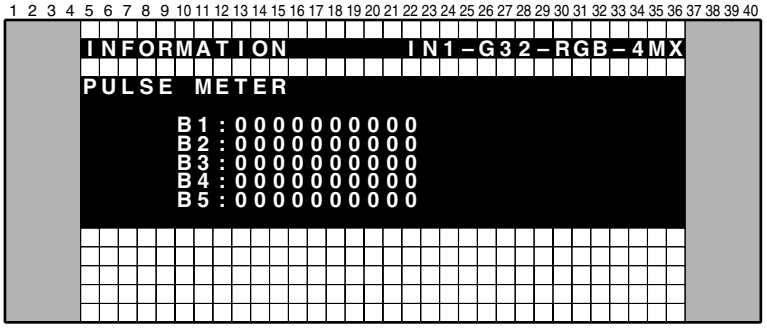
To update the temperature values or fan output data, use the [◄] or [►] key.

7. HOUR METER



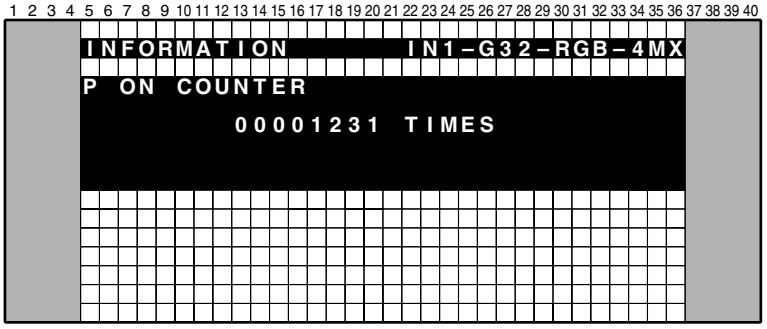
The cumulative power-on time is displayed.

8. PULSE METER



The cumulative number of pulses is displayed.

9. P ON COUNTER

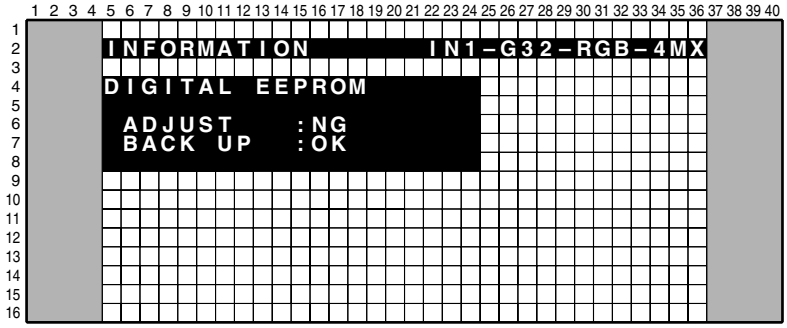


The cumulative number of times the unit was turned on is displayed.

10. BACKUP EEPROM

When the DIGITAL VIDEO Assy is to be replaced, the adjustment values in it are temporarily stored in the backup ROM then are written on the new Assy after replacement.

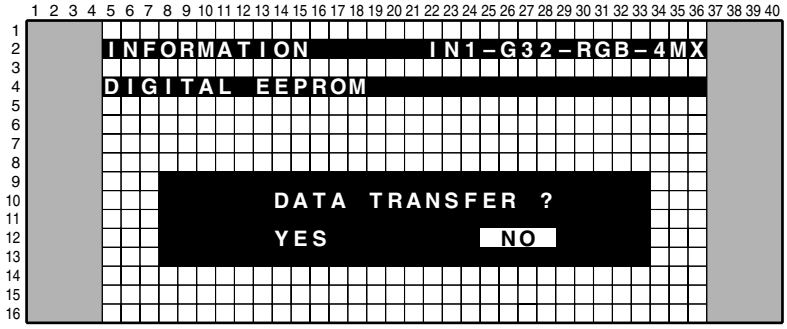
① Check if adjustment has been made on the DIGITAL VIDEO Assy or not (i.e., in the state of a new service part), and if the data on any adjustment values are retained in the backup ROM or not.



- ADJUST: OK (DIGITAL VIDEO Assy adjusted)
  NG (DIGITAL VIDEO Assy not adjusted)
- BACKUP: OK (Adjustment data retained in the backup ROM)
  NG (Adjustment data not retained in the backup ROM)

② Downloading the data for the DIGITAL VIDEO Assy from the backup ROM

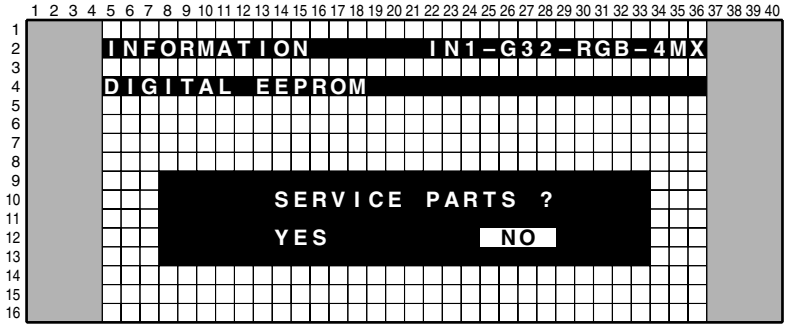
- Press the SET key while display ① above is displayed, and the following display will appear.



- Move the cursor to YES and press the SET key.
  The data in the backup ROM are copy to the DIGITAL VIDEO Assy.
  (When a new DIGITAL VIDEO Assy has been mounted, it now has the adjustment data suited for the panel.)
- Move the cursor to NO, and press the SET key.
  Copy of the data to the DIGITAL VIDEO Assy will not be executed.

③ Clearing the data in the ROM of the DIGITAL VIDEO Assy

- When YES or NO is selected while display ② above is displayed, the following display will appear.



- Move the cursor to YES and press the SET key.
  The data in the ROM of the DIGITAL VIDEO Assy are cleared, and the Assy has no specific adjustment data.
- Move the cursor to NO and press the SET key. The data in the ROM of the DIGITAL VIDEO Assy are not cleared.
  When YES selected on display ② and the data were copy, select NO on this display.

Note: When YES or NO is selected on display ③ above, the display returns to that of ① above.

Adjustment of corresponding route unevenness

Basically, only replacement of service parts is required, and adjustment is not required.

No.	Command	Adjustment Parameter Name in Factory	Function
1	VSG	CVY GAIN	IC1 MAIN GAIN adjustment (switching routes with the SWM [main] and SWS [sub] commands)
2	VSO	CVY OFFSET	IC1 MAIN OFFSET adjustment (switching routes with the SWM [main] and SWS [sub] commands)
3	RYG	RY GAIN	AD R GAIN adjustment (correction in differences between component- and RGB-system signals)
4	GYG	GY GAIN	AD G GAIN adjustment (correction in differences between component- and RGB-system signals)
5	BYG	BY GAIN	AD B GAIN adjustment (correction in differences between component- and RGB-system signals)
6	ADC	AD MAIN GAIN	AD MAIN RGB GAIN adjustment (for main screen)
7	MRG	AD MAIN RY GAIN	AD MAIN RY GAIN adjustment (for main screen)
8	MGG	AD MAIN GY GAIN	AD MAIN GY GAIN adjustment (for main screen)
9	MBG	AD MAIN BY GAIN	AD MAIN BY GAIN adjustment (for main screen)
10	MRO	AD MAIN RY OFS	AD MAIN RY OFFSET adjustment (for main screen)
11	MGO	AD MAIN GY OFS	AD MAIN GY OFFSET adjustment (for main screen)
12	MBO	AD MAIN BY OFS	AD MAIN BY OFFSET adjustment (for main screen)
13	SRG	AD SUB RY GAIN	AD SUB RY GAIN adjustment (for sub screen)
14	SGG	AD SUB GY GAIN	AD SUB GY GAIN adjustment (for sub screen)
15	SBG	AD SUB BY GAIN	AD SUB BY GAIN adjustment (for sub screen)
16	SRO	AD SUB RY OFS	AD SUB RY OFFSET adjustment (for sub screen)
17	SGO	AD SUB GY OFS	AD SUB GY OFFSET adjustment (for sub screen)
18	SBO	AD SUB BY OFS	AD SUB BY OFFSET adjustment (for sub screen)

Reference: Commands for adjustment of differences in signals and memory cells used for storing adjustment values

• Basically no adjustment is required for the Service Assy, as it is properly adjusted before shipment.

Adjustment values to be stored in the EEPROM of the AV I/O (INDIVIDUAL mode)

Adjustment values differ depending on the input function, input signal format, and main/sub screen.

Input and Signal Format	Commands for Adjustment	
	Route for the Main Screen	Route for the Sub Screen
INPUT1 (RGB)	RYG GYG BYG	RYG GYG BYG
INPUT1 (Color difference)	RYG GYG BYG	RYG GYG BYG

• Four adjustment tables are provided here, depending on the input function, input signal format, and main/sub screen.
• No adjustment is required for INPUT 2, which is of DVI (digital video interface) standards.

Adjustment values to be stored in the EEPROM of the PDA-5003 or PDA-5004

Adjustment values differ depending on the input function and main/sub screen.

Input and Signal Format	Commands for Adjustment	
	Route for the Main Screen	Route for the Sub Screen
INPUT3 (Y/C)	VSG VSO	RYG GYG BYG
INPUT4 (Comp. V)	VSG VSO	RYG GYG BYG
INPUT5 (Y/C)	RYG GYG BYG	RYG GYG BYG
INPUT5 (Color difference)	RYG GYG BYG	RYG GYG BYG

• Eight adjustment tables are provided here, depending on the input function and main/sub screen.

Adjustment values to be stored in the EEPROM of the RGB (COMMON mode)

Adjustment values differ depending on the signal resolution, input signal format, and main/sub screen.
Note: No adjustment is required for DVI input or signals converted to digital signals by IC1.

[Main adjustment 1]
Main A/D adjustments for R, G, and B individually (COMMON-RGB mode)

Input and Signal Format	Commands for Adjustment		Conditions for the Tables to be Switched
525i (RGB)	MRG MGG MBG	MRO MGO MBO	Video RGB signals (excl. 1125p signals)
525i (Color difference)	MRG MGG MBG	MRO MGO MBO	Video color-difference signals (excl. 1125p signals)
1080p (RGB)	MRG MGG MBG	MRO MGO MBO	All PC signals and 1125p RGB signals
1080p (Color difference)	MRG MGG MBG	MRO MGO MBO	1125p color-difference signals

• For adjustment according to the above tables, input corresponding signals to INPUT 5 to change the RGB/color-difference signal setting then perform adjustment.
• Four adjustment tables are provided here, depending on the signal resolution, input signal format, and main/sub screen.

[Sub adjustment 1]
Main A/D adjustments for R, G, and B individually (COMMON-RGB 1 mode)

Input and Signal Format	Commands for Adjustment		Conditions for the Tables to be Switched
RGB	SRG SGG SBG	SRO SGO SBO	All R, G, and B signals
Color difference	SRG SGG SBG	SRO SGO SBO	All color-difference signals

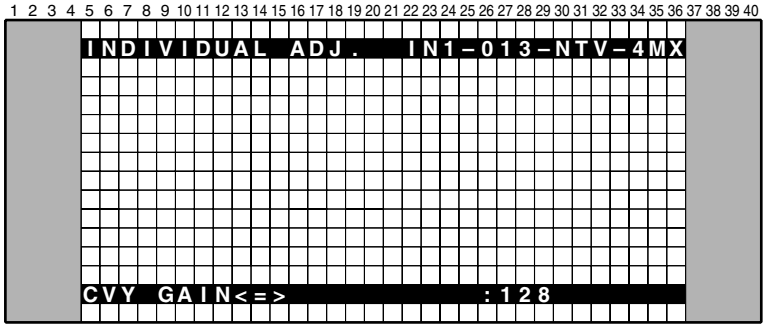
• For adjustment according to the above tables, input video signals to INPUT 5 to switch to the route for sub input and to change the RGB/color-difference signal setting then perform adjustment.
• Two adjustment tables are provided here, depending on the signal format.

[Main adjustment 2]
Main A/D adjustments for all R, G, and B simultaneously (COMMON-RGB 2 mode)

Input and Signal Format	Commands for Adjustment	Conditions for the Tables to be Switched
RGB	ADC	All R, G, and B signals
Color difference	ADC	All color-difference signals

• For adjustment according to the above tables, input video signals to INPUT 5 to switch to the route for main input and to change the RGB/color-difference signal setting then perform adjustment.
• A contrast gain commits this adjustment command simultaneously three colors.
• Two adjustment tables are provided here, depending on the signal format.

INDIVIDUAL ADJ. mode



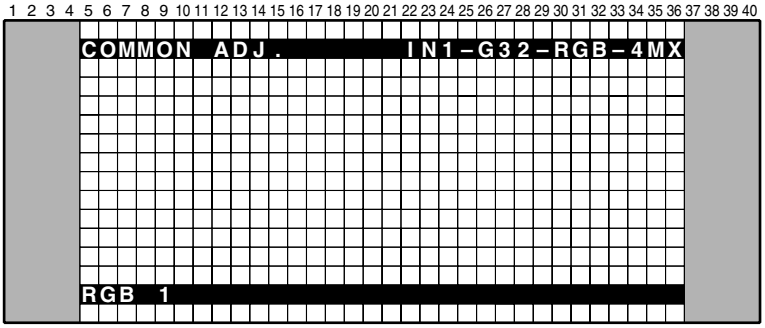
Each time the ▲ or ▼ key is pressed, the individual adjustment items are changed, as follows:

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range	Remarks
1	VSG	CVY GAIN<=> : ***	MICHAEL (IC6255) input GAIN adj.	064 to 191	Select a route with the command SWM (main) and the command SWS (sub).
2	VSO	CVY OFFSET<=> : ***	MICHAEL (IC6255) input OFFSET adj.	064 to 191	
3	RYG	RY GAIN<=> : ***	AD (IC6001 or IC6602) R input GAIN adj.	000 to 255	The memory tables for the RGB and component systems are separate, and are switchable with the command MCD.
4	GYG	GY GAIN<=> : ***	AD (IC6001 or IC6602) G input GAIN adj.	000 to 255	
5	BYG	BY GAIN<=> : ***	AD (IC6001 or IC6602) B input GAIN adj.	000 to 255	

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

Note: The differences in signals for the main and sublevel screens from the AV/IO Assy are compensated, and the compensation data are stored in the EEPROM (IC8705) for each screen.

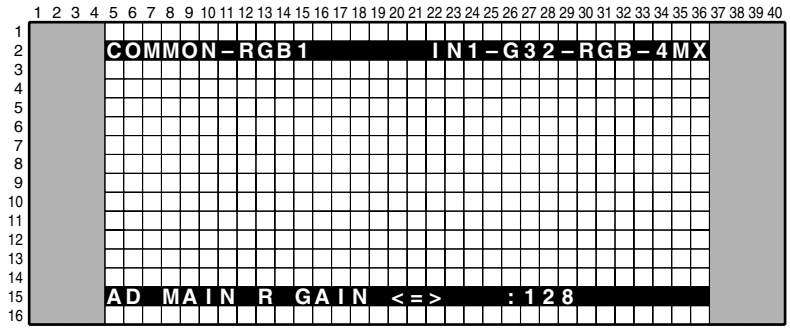
COMMON ADJ. mode



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:
- RGB1(+) : Adjustment of a video card and the RGB Assy
- RGB2(+) : Adjustment of the RGB Assy
- PANEL1(+) : Adjustment items related to the drive (common to the unit)
- PANEL2(+) : Adjustment items related to the drive (dependent on signals)

Each time the SET key is pressed, items grouped under the subitem are selected one by one.

1. COMMON-RGB1



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:

When the main input is selected

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range	Remarks
1	MRG	AD MAIN R GAIN <=> : ***	AD (IC6001) MAIN R GAIN adj. (for main screen)	000 to 255	
2	MGG	AD MAIN G GAIN <=> : ***	AD (IC6001) MAIN G GAIN adj. (for main screen)	000 to 255	
3	MBG	AD MAIN B GAIN <=> : ***	AD (IC6001) MAIN B GAIN adj. (for main screen)	000 to 255	
4	MRO	AD MAIN R OFFSET <=> : ***	AD (IC6001) MAIN R OFFSET adj. (for main screen)	000 to 255	
5	MGO	AD MAIN G OFFSET <=> : ***	AD (IC6001) MAIN G OFFSET adj. (for main screen)	000 to 255	
6	MBO	AD MAIN B OFFSET <=> : ***	AD (IC6001) MAIN B OFFSET adj. (for main screen)	000 to 255	

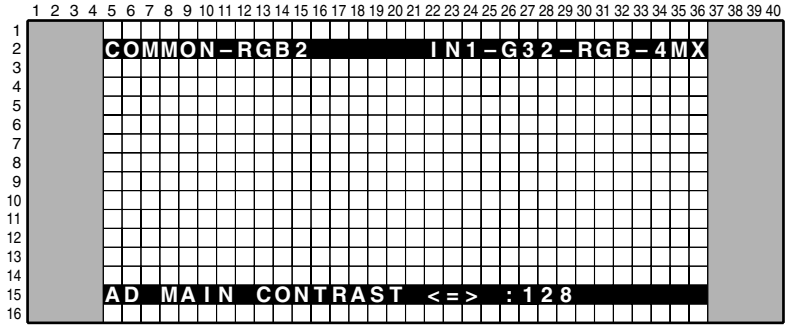
When the sub input is selected

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range	Remarks
1	SRG	AD SUB R GAIN <=> : ***	AD (IC6602) SUB R GAIN adj. (for sub screen)	000 to 255	
2	SGG	AD SUB G GAIN <=> : ***	AD (IC6602) SUB G GAIN adj. (for sub screen)	000 to 255	
3	SBG	AD SUB B GAIN <=> : ***	AD (IC6602) SUB B GAIN adj. (for sub screen)	000 to 255	
4	SRO	AD SUB R OFFSET <=> : ***	AD (IC6602) SUB R OFFSET adj. (for sub screen)	064 to 191	
5	SGO	AD SUB G OFFSET <=> : ***	AD (IC6602) SUB G OFFSET adj. (for sub screen)	064 to 191	
6	SBO	AD SUB B OFFSET <=> : ***	AD (IC6602) SUB B OFFSET adj. (for sub screen)	064 to 191	

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

Note: The differences in signals for the main and sublevel screens from the RGB Assy are compensated, and the compensation data are stored in the EEPROM (IC7205) for each screen.

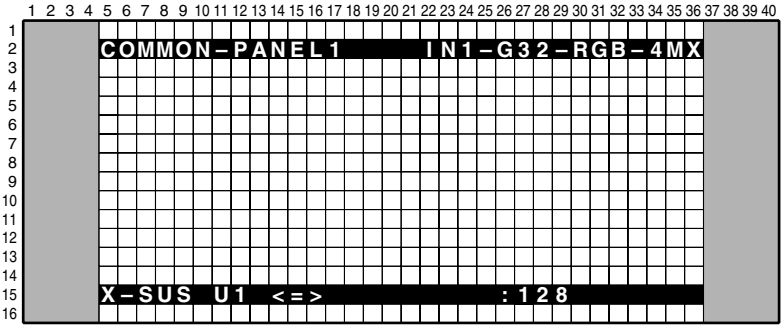
2. COMMON-RGB 2



No.	Corresponding 232C Command	Function/Display	Content	Adjustable range	Remarks
1	ADC	AD MAIN CONTRAST<=> : ***	AD (IC6001) MAIN RGB GAIN adj. (for main screen)	000 to 255	

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

3. COMMON-PANEL1



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:

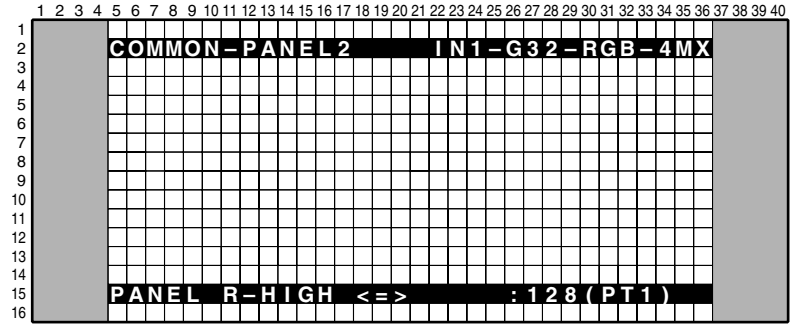
No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range
1	XU1	X-SUS U1 <=> : ***	Adjustment of X-SUS leading edge pulse U1	124 to 132
2	XU2	X-SUS U2 <=> : ***	Adjustment of X-SUS leading edge pulse U2	124 to 132
3	XD1	X-SUS D1 <=> : ***	Adjustment of X-SUS trailing edge pulse D1	124 to 132
4	XD2	X-SUS D2 <=> : ***	Adjustment of X-SUS trailing edge pulse D2	124 to 132
5	YU1	Y-SUS U1 <=> : ***	Adjustment of Y-SUS leading edge pulse U1	124 to 132
6	YU2	Y-SUS U2 <=> : ***	Adjustment of Y-SUS leading edge pulse U2	124 to 132
7	YD1	Y-SUS D1 <=> : ***	Adjustment of Y-SUS trailing edge pulse D1	124 to 132
8	YD2	Y-SUS D2 <=> : ***	Adjustment of Y-SUS trailing edge pulse D2	124 to 132
9	YD3	Y-SUS D3 <=> : ***	Adjustment of X-SUS trailing edge pulse D3	124 to 132
10	YD4	Y-SUS D4 <=> : ***	Adjustment of X-SUS trailing edge pulse D4	124 to 132
11	VSU	VLT-SUS <=> : ***	SUS voltage adjustment	000 to 255
12	VOF	VLT-OFS <=> : ***	OFFSET voltage adjustment	000 to 255

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.

Notes:

- Adjustments No. 1 to No. 10 above are not normally required, unless so instructed by Service Information, etc.
- Readjustment of values for No. 11 [VSU] and No. 12 [VOF] are required when the service panel is replaced.

4. COMMON-PANEL2



Each time the ▲ or ▼ key is pressed, the subitems are changed, as follows:

No.	Corresponding 232C Command	Function/Display	Content	Adjustable Range
1	PRH	PANEL R HIGH <=> : *** (PTO)	Panel W/B R-HIGH adjustment	000 to 511
2	PGH	PANEL G HIGH <=> : *** (PTO)	Panel W/B G-HIGH adjustment	000 to 511
3	PBH	PANEL B HIGH <=> : *** (PTO)	Panel W/B B-HIGH adjustment	000 to 511
4	PRL	PANEL R LOW <=> : *** (PTO)	Panel W/B R-LOW adjustment	000 to 999
5	PGL	PANEL G LOW <=> : *** (PTO)	Panel W/B G-LOW adjustment	000 to 999
6	PBL	PANEL B LOW <=> : *** (PTO)	Panel W/B B-LOW adjustment	000 to 999
7	ABL	ABL LEVEL <=> : *** (ABx)	Power consumption adjustment	000 to 999

"***" in the table above represents the adjustment value.
The value of each subitem can be changed using the ◄ or ► key.
White balance adjustment.(From No.1 to No.6). (Refer to 116 pages of the " [W/B-adjustment procedurs]")

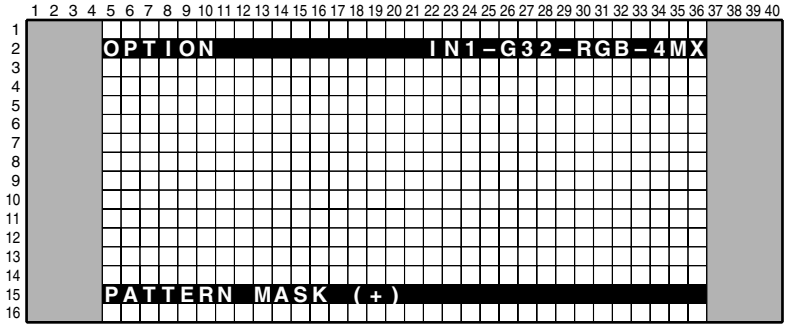
Notes: Adjustments No. 7: [ABL] above are not normally required, unless so instructed by Service Information, etc.

"(PTO)" and "(ABx)" in the table above represent the following:

Indication	Table
PT1	For PC and NTSC
PT2	For PAL, For PC (48Hz)

Indication	Table
AB1	For 60Hz and 75Hz video
AB2	For 50Hz video, For 48Hz PC
AB3	For PC

OPTION mode



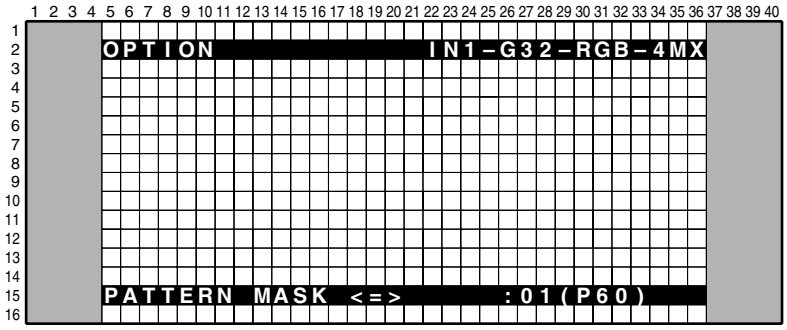
Select the main item "OPTION" using the MUTE key then select the subitems shown in the table below using the ▲ or ▼ key.

No.	Function/Display	Content	Remarks
1	PATTERN MASK (+)	For selecting Pattern mask of IC4	A lower layer exists.
2	FULL MASK (+)	For selecting raster mask of IC4	A lower layer exists.
3	DYNAMIC RANGE	ON ⇔ OFF	The last setting is not stored in memory (initial setting: ON).
4	EDID WRITE MODE	DISABLE ⇔ ENABLE	The last setting is not stored in memory (initial setting: DISABLE).
5	INTEGRATOR MODE	DISABLE ⇔ ENABLE	Initial setting: ENABLE

Note:

- For PATTERN MASK (+) and FULL MASK (+), press the SET key to switch to the lower layer.
- Adjustments No. 3 to 5 above are not required for servicing.

1. PATTERN MASK
2. FULL MASK



To select the mask frequency, use the ◄ or ► key.
To select the mask pattern, use the ▲ or ▼ key.

Mask Frequency

No.	Corresponding RS-232C Command	Function/ Display	Content
1	F48	V48	Video 48-Hz sequence
2	F50	V50	Video 50-Hz sequence
3	F60	V60 (initial value)	Video 60-Hz sequence
4	F61	P60	PC 60-Hz sequence
5	F70	P70	PC 70-Hz sequence
6	F72	V72	Video 72-Hz sequence
7	F75	V75	Video 75-Hz sequence

Pattern Mask

No.	Corresponding RS-232C Command	Function/ Display	Content
1	M00	OFF	Mask mode: OFF
2	M01	01	White 0 to 100%
3	M02	02	Aging mask
4	M03	03	Aging mask (detection of still picture: OFF)
5	M10	10	H RAMP1
6	M11	11	H RAMP2
7	M12	12	H RAMP3
8	M13	13	H RAMP4
9	M14	14	V RAMP
10	M15	15	H/V RAMP
11	M20	20	Window0
12	M21	21	Window1
13	M22	22	Window2
14	M23	23	Window3
15	M24	24	Window4
16	M25	25	Window5
17	M26	26	Window6
18	M27	27	Window7
19	M28	28	Window8
20	M29	29	Window9
21	M2E	2E	Wiper for erasing afterimage
22	M30	30	COLOR BAR
23	M31	31	Slanted lines

Full Mask

No.	Corresponding RS-232C Command	Function/ Display	Content
1	M00	OFF	Mask mode: OFF
2	M51	51	Raster – White
3	M52	52	Raster – Red
4	M53	53	Raster – Green
5	M54	54	Raster – Blue
6	M55	55	Raster – Black
7	M56	56	Raster – Cyan
8	M57	57	Raster – Mazenta
9	M58	58	Raster – Yellow
10	M59	59	Raster – Cyan 274
11	M60	60	Raster – 50 fresh color
12	M61	61	Raster – 50 purple
13	M62	62	Raster – 50 sky blue
14	M63	63	Raster – Red 779
15	M64	64	Raster – Cyan 218
16	M65	65	Raster – Cyan 448
17	M66	66	Raster – 43 fresh color
18	M67	67	Raster – Red 640
19	M68	68	Raster – Mazenta 98
20	M69	69	Raster – 43 sky blue 1
21	M70	70	Raster – 43 sky blue 2
22	M71	71	Raster – 43 purple
23	M72	72	Raster – Blue 960
24	M73	73	Raster – Yellow 512
25	M74	74	Raster – Gray 512

3. DYNAMIC RANGE

The setting can be changed using the ◄ or ► key.

No.	Corresponding RS-232C Command	Function/ Display	Content
1	DYY	ON	DYNAMIC RANGE correction: ON (initial setting)
2	DYN	OFF	DYNAMIC RANGE correction: OFF

4. EDID WRITE MODE

The setting can be changed using the ◄ or ► key.

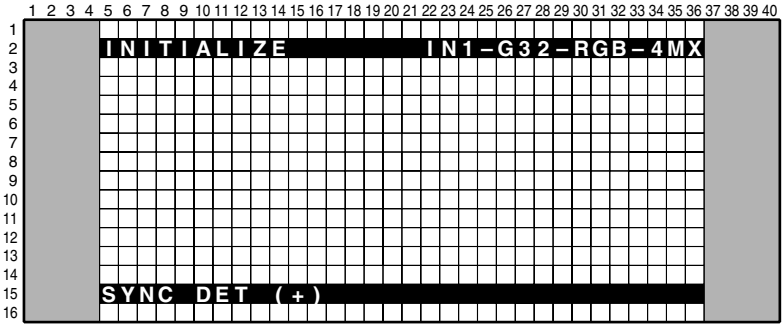
No.	Corresponding RS-232C Command	Function/ Display	Content
1	EWN	DISABLE	Prohibiting writing EDID data (initial setting)
2	EWY	ENABLE	Enabling writing EDID data

5. INTEGRATOR MODE

The setting can be changed using the ◄ or ► key.

No.	Corresponding RS-232C Command	Function/ Display	Content
1	–	ENABLE	Permitting INTEGRATOR MODE (initial setting)
2	–	DISABLE	Prohibiting INTEGRATOR MODE

INITIALIZE mode

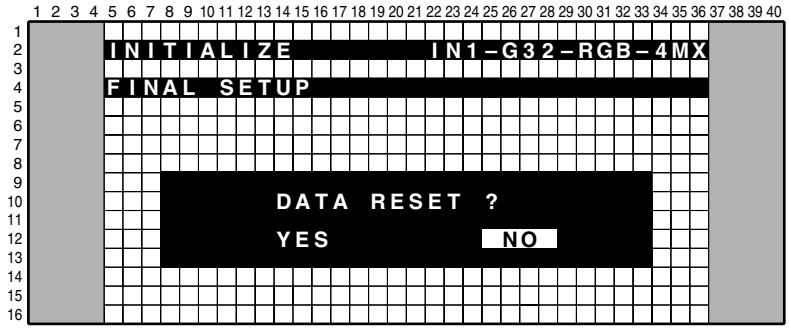


The subitems can be changed using the ▲ or ▼ key.

No.	Corresponding RS-232C Command	Function/Display	Content
1	–	SYNC DET (+)	(Not used)
2	–	DRIVE MODE (+)	(Not used)
3	–	SIDE MASK LEVEL (+)	(Not used)
4	–	PANEL REVICE (+)	(Not used)
5	FST	FINAL SETUP	For initializing user's settings and some factory settings
6	–	C TEMP LOW (+)	For adjusting the user's C TEMP MODE item selected
7	–	C TEMP MID LOW (+)	
8	–	C TEMP STD (+)	
9	–	C TEMP MID HIGH (+)	
10	–	C TEMP HIGH (+)	
11	–	C TEMP MODE2 (+)	(Not used)
12	–	SLOT PROTECT<=>	For setting permission/prohibition of SLOT

Note: Any item followed by (+) has a lower layer to which you can switch using the SET key.

1. FINAL SETUP



Select YES or NO using the ◄ or ► key then press the SET key for finalizing the selection:
YES : For executing FINAL SETUP
NO : For not executing FINAL SETUP

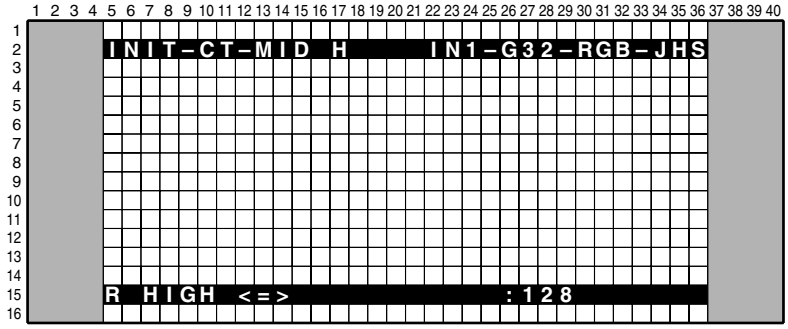
In FINAL SETUP, the following items can be initialized:

	Item (operation)	Factory setting	Remarks
Normal	Input function (main)	INPUT1	
	Input function (sub)	INPUT2	
	Screen size	VIDEO WIDE or FULL	The screen-size setting will be one of the factory-preset values, based on the results of signal-type detection (SIG-MODE).
		PC DOT BY DOT or FULL or 4:3 or PARTIAL	
	Volume	0	
	Multi screen	OFF	
	FUNCTIONAL LOCK	LOCK OFF	
Menu setting	PICTURE	Default setting for all adjustment items	For each input function
	SCREEN	Default setting for all adjustment items	For each input function
	POWER MANAGEMENT	OFF	For each input function
	AUTO POWER OFF	DISABLE	For each input function
	COLOR TEMP.	MIDDLE	For each input function
	DNR	MIDDLE	For each input function
	MPEG NR	LOW	For each input function
	CTI	ON	For each input function
	PURECINEMA	OFF	For each input function
	COLOR DECODING	COMPONENT 1 or COMPONENT 2	One of the factory-preset signals is output, based on the results of signal-type detection (SIG-MODE) for the input function.
	CLAMP POSITION	AUTO	For each input function
	COLOR SYSTEM	AUTO	For each input function
	SIGNAL FORMAT	VGA or XGA or SXGA or 720-PC *	One of the factory-preset signals is output, based on the results of signal-type detection (SIG-MODE) for the input function.
	LANGUAGE	ENGLISH	
	ENERGY SAVE	STANDARD	
	SCREEN MGT.	OFF/ 01H00M	
	ORBITER	OFF	
	MASK CONTROL	ON	
	AUTO SET UP MODE	INACTIVE	
	AUTO FUNCTION	OFF	
	AUDIO OUT	FIXED	

* 720-PC selectable only with video card is inserted

	Item (operation)	Factory setting	Remarks
Integrator menu setting	PICTURE	Default setting for all adjustment items	For each input function
	WHITE BAL.	Default setting for all adjustment items	For each input function
	SCREEN	Default setting for all adjustment items	For each input function
	GRADATION	VIDEO DRE MID PC GAMMA 2.0	The screen-size setting will be one of the factory-preset values, based on the results of signal-type detection (SIG-MODE).
	BRT. ENHANCE	OFF	For each input function
	SUB VOLUME	20	For each input function
	SCREEN MGT. SET	00H10M/00H30M/WHITE/ 00H10M/INV.1/1	
	SCREEN MASK	OFF	
	SIDE MASK	NORMAL/80/80/80	
	2x2 MODE	OFF/UP LEFT/NORMAL	
	MIRROR MODE	OFF	
	BAUD RATE	9600BPS	
	ID NO. SET	– –	
	OSD	ON	
	FRONT INDICATOR	ON	
	FAN CONTROL	AUTO	
	COLOR MODE	NORMAL	
	PRO USE	OFF/OFF/DISABLE/ MOTION	
	FRC	MODE1	
Factory	PATTERN MASK	OFF	
	FULL MASK	OFF	
	EDIT WRITE MODE	DISABLE	
232C	LOUDNESS	OFF	

2. C TEMP



The indication on the 2nd line in the above display varies according to the subitem selected in the upper layer, as follows:
INIT-CT- ****

****: LOW/MID L/STD/MID H/HIGH/MOD2

Notes: Adjustments are not normally required, unless so instructed by Service Information, etc.

Each time the ▲ or ▼ key is pressed, items grouped under the subitems are changed, as follows:

No.	Function/Display	Content
1	R HIGH <=>	For adjusting R highlight in the selected color temperature mode
2	G HIGH <=>	For adjusting G highlight in the selected color temperature mode
3	B HIGH <=>	For adjusting B highlight in the selected color temperature mode
4	R LOW <=>	For adjusting R lowlight in the selected color temperature mode
5	G LOW <=>	For adjusting G lowlight in the selected color temperature mode
6	B LOW <=>	For adjusting B lowlight in the selected color temperature mode

To change the value of each item, press the ◄ or ► key.

3. SLOT PROTECT

Option No.	Function/ Display	Operation/Control	Result of Distinction			
			PDA-5002	PDA-5003 PDA-5004	3G-TYPE ∗ (∗ A - H)	4G-TYPE ∗ (∗ A - J)
1 (initial setting)	ALL	Permitting all Video card	×	○	○	○
2	P-SLOT	Permitting only the Video card (PDA-5003/ PDA- 5004) made by Pioneer	×	○	×	×

○: Operable according to the setting ×: The corresponding Video card will be treated as an incompatible Video card.

• When a disallowed video card is inserted, the power is not turned on, and the red and green LEDs flash alternatively.
• For details on results of distinction, see "SLOT-DET of the VERSION (2)."

6.4 COMMAND DESCRIPTION

■ About GET Command

● Operation description of GET command

■ Conditions under which GET commands are enabled

Most of the GET commands are enabled at any time, regardless of unit's being on/off or in Factory or Normal mode. However, some GET commands must be issued while the power is on to acquire correct data.

[Operations]

- Reading out and sending various data stored in the EEPROMs and the RAMs of microcomputers
- Adding a received string of command characters at the beginning of reply data as an echoback
- Decimal notation are converted into ASCII numerics and transmitted.
- "CS" represents an ASCII code consisting of two hexadecimal alphanumerics, and the sum of CS +transmission data(excl. STX and ETX) must be 0.

■ Reply data format

	STX	Received command (3byte)	Transmission data	•••	Transmission data	CS (2byte)	ETX
Example:	[02]	GAS	2	•••	0	97	[03]

GST: GET STATUS

Order	Data	Size	Remarks
1	Display data	3 byte	See the table below.
2	Power data	3 byte	See the table below. (The third character is for the subinput.)
3	Input function data (main)	3 byte	Input data during GST reception (INPUTs 1 to 5 are indicated as IN 1-5.)
4	Input function data (sub)	3 byte	Subinput data during GST reception (INPUTs 1 to 5 are indicated as IS 1-5.)
5	Screen size data	1 byte	See the table below.
6	Two-screen indication	1 byte	0: OFF (Full-screen) 1: 2-SCREEN 2: PinP (Lower right) 3: PinP (Upper right) 4: PinP (Upper left) 5: PinP (Lower left) 6: PoutP
7	FUNCTIONAL LOCK data	1 byte	0: LOCK OFF 1: BUTTONS LOCK 2: IR LOCK 3: IR&BUTTONS LOCK 4: MEMORY LOCK
8	Dummy data	3 byte	(Three-digit figure)
9	Temperature data 2 (TEMP2)	3 byte	°C (*)
10	Temperature data 3 (TEMP3)	3 byte	°C (*)
11	Serial	15 byte	
12	Dummy data	3 byte	(Three-digit figure)
13	Dummy data	3 byte	
14	HOUR METER data	5 byte	Indicated in hours
15	Dummy data	2 byte	(Checksum)

Display data	1st character 2nd character 3rd character	Data on generation: 4 (Fixation) Data on screen size: 4 (43 inches), 5 (50 inches) Data on destination: M (Fixation)
Power data	1st character 2nd character	Power status and signal status PN (power on & at usually, of signal Input), PL (power on & no input), PO (power on & out of range signal Input), SN (stand by/ on), SW (power management standby), SS (SD and PD standby),
	3rd character	Multi screen features. The sub signal state of a input (see Note. 2) N (at usually, of signal Input), L(no Input), O (out of range in signal Input)
Screen size data	1st character	Numbers used are the same as those that indicate SIG-MODE screen sizes. 0: Dot by Dot PARTIAL, 1: 4:3, 2: FULL or FULL1080i, 3: ZOOM, 4: WIDE, 6: CINEMA, 8: FULL1035i, 9: UNDERSCAN

Not.1: During Standby or immediately after the power is turned on, accurate temperature data cannot be obtained. To obtain an accurate temperature reading, wait for a few minutes after the power is turned on.

Not.2: During Standby or full-screen display, dummy data (symbols) are output.

Not.3: During Standby or full-screen display, values stored in memory of the unit are output.

GS1: Returning information on the model and the version of the software

Order	Data	Size
1	Data on the display	3 byte
2	Version of the module microcomputer	4 byte
3	Version of the IC4-MANTA	4 byte
4	Sequence version (50VIDEO)	4 byte
5	Sequence version (50PC)	4 byte
6	Sequence version (43VIDEO)	4 byte
7	Sequence version (43PC)	4 byte
8	Version of the IF microcomputer	4 byte
9	Version of the main microcomputer	4 byte
10	Version of the IC3-MANTA	4 byte
11	Version of the OSD	4 byte
12	Dummy	12 byte

Breakdown of the data on the display

Data	Model
MX5	PDP-504CMX series
MX4	PDP-434CMX series

GPW: RGB-level-related adjustment values of the panel system

Order	Data	Size
1	Panel W/B table currently used	3 byte
2	Main contrast	4 byte
3	Red high light of the W/B adjustment value	4 byte
4	Green high light of the W/B adjustment value	4 byte
5	Blue high light of the W/B adjustment value	4 byte
6	Main brightness	4 byte
7	Red low light of the W/B adjustment value	4 byte
8	Green low light of the W/B adjustment value	4 byte
9	Blue low light of the W/B adjustment value	4 byte

Data	Table
PT1	WB table for NTSC
PT2	WB table for PAL
PT3	Reserved table

GPD: Power-down information

Order	Data	Size	Order	Data	Size
1	Latest "1st PD" data	1 byte	17	Fifth latest “1st PD” data	1 byte
2	Latest "2nd PD" data	1 byte	18	Fifth latest “2nd PD” data	1 byte
3	Data of hour meter for the latest PD	7 byte	19	Data of hour meter for the fifth latest PD	7 byte
4	Data on temperature for the latest PD (TEMP1)	3 byte	20	Data on temperature for the fifth latest PD (TEMP1)	3 byte
5	Second latest “1st PD” data	1 byte	21	Sixth latest “1st PD” data	1 byte
6	Second latest “2nd PD” data	1 byte	22	Sixth latest “2nd PD” data	1 byte
7	Data of hour meter for the second latest PD	7 byte	23	Data of hour meter for the sixth latest PD	7 byte
8	Data on temperature for the second latest PD (TEMP1)	3 byte	24	Data on temperature for the sixth latest PD (TEMP1)	3 byte
9	Third latest “1st PD” data	1 byte	25	Seventh latest “1st PD” data	1 byte
10	Third latest “2nd PD” data	1 byte	26	Seventh latest “2nd PD” data	1 byte
11	Data of hour meter for the third latest PD	7 byte	27	Data of hour meter for the seventh latest PD	7 byte
12	Data on temperature for the third latest PD (TEMP1)	3 byte	28	Data on temperature for the seventh latest PD (TEMP1)	3 byte
13	Fourth latest “1st PD” data	1 byte	29	Eighth latest “1st PD” data	1 byte
14	Fourth latest “2nd PD” data	1 byte	30	Eighth latest “2nd PD” data	1 byte
15	Data of hour meter for the fourth latest PD	7 byte	31	Data of hour meter for the eighth latest PD	7 byte
16	Data on temperature for the fourth latest PD (TEMP1)	3 byte	32	Data on temperature for the eighth latest PD (TEMP1)	3 byte

Hour meter data; 1 to 5 byte: time, 6 to 7 byte: minute

• Details on "1st/2nd PD" data

Data	Power-down Point
0	No power-down
1	Not used (for MR-POWER)
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D, E	Spare
F	Power-down point not identified

GNG: NG history

Order	Data	Size	Order	Data	Size
1	Latest SD data	1 byte	17	Fifth latest SD data	1 byte
2	Data of subcategory for the latest SD	1 byte	18	Data of subcategory for the fifth latest SD	1 byte
3	Data of hour meter for the latest SD	7 byte	19	Data of hour meter for the fifth latest SD	7 byte
4	Data on temperature for the latest SD	3 byte	20	Data on temperature for the fifth latest SD	3 byte
5	Second latest SD data	1 byte	21	Sixth latest SD data	1 byte
6	Data of subcategory for the second latest SD	1 byte	22	Data of subcategory for the sixth latest SD	1 byte
7	Data of hour meter for the second latest SD	7 byte	23	Data of hour meter for the sixth latest SD	7 byte
8	Data on temperature for the second latest SD	3 byte	24	Data on temperature for the sixth latest SD	3 byte
9	Third latest SD data	1 byte	25	Seventh latest SD data	1 byte
10	Data of subcategory for the third latest SD	1 byte	26	Data of subcategory for the seventh latest SD	1 byte
11	Data of hour meter for the third latest SD	7 byte	27	Data of hour meter for the seventh latest SD	7 byte
12	Data on temperature for the third latest SD	3 byte	28	Data on temperature for the seventh latest SD	3 byte
13	Fourth latest SD data	1 byte	29	Eighth latest SD data	1 byte
14	Data of subcategory for the fourth latest SD	1 byte	30	Data of subcategory for the eighth latest SD	1 byte
15	Data of hour meter for the fourth latest SD	7 byte	31	Data of hour meter for the eighth latest SD	7 byte
16	Data on temperature for the fourth latest SD	3 byte	32	Data on temperature for the eighth latest SD	3 byte

Hour meter data; 1 to 5 byte: time, 6 to 7 byte: minute

• Details on the SD data

Data	Cause of Shutdown
0	No abnormality
1	IC4
2	Module microcomputer IIC
3	Abnormality in DIG-RST2 (power decrease of ASIC)
4	Panel having abnormally high temperature
5	Audio failure (short-circuiting of the speakers)
6	Communication failure of the module microcomputer
7	Three-wire serial communication failure of the main microcomputer
8	IIC communication failure of the main microcomputer
9	Communication failure of the main microcomputer
A	Fan stopped
B	Temperature abnormality
D	Abnormality in MAIN-RST2
F	Others

• Data on the subcategories for the module microcomputer IIC

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (4k)
2	EEPROM (2k)

• Data on the subcategories for failure in 3-wire serial communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	Communication failure of the IF microcomputer
2	IC2 communication failure
3	IC3 communication failure

• Data on the subcategories for failure in IIC communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (128k)
2	GCR
3	IC1 main
4	IC1 sub
5	AD-PLL main
6	AD-PLL sub
7	IC6
8	HDMI1
9	HDMI2
A	7.3VIDEO SW
B	6.2RGB SW
C	Front end 1
D	Front end 2
E	C.C. UCOM/TELETEXT UCOM
F	EEPROM (SLOT)
G	Not used
H	EDID ROM
N	IC6/2 (CMX)

• Subcategory data on abnormal temperature

Data	Cause of Shutdown
2	Temperature inside the unit (INSIDE)
3	Ambient temperature (AIR)

• Subcategory data on other failures

Data	Cause of Shutdown
1	Optical sensor (RLS)
2	Power monitor 1 (VCC-D1)
3	Power monitor 1 (VCC-D2)

GS2: Status information

Order	Data	Size	Remarks
1	Notifying of switching to Standby mode	1 byte	1: Successfully switched to Standby mode
2	Whether the unit has already been adjusted or not	1 byte	0: Adjusted, 1: Not adjusted
3	With/without backup of adjustment data	1 byte	0: With backup, 1: Without backup
4	Power-down information	2 byte	1st byte: 1st PD, 2nd byte: 2nd PD
5	Temperature information (TEMP1)	3 byte	000 to 255
6	Abnormality in RST2 (power decrease of the DC-DC converter)	1 byte	0: Normal, 1: Shutdown process caused by an abnormality completed, 2: In the process of displaying a warning against shutdown caused by an abnormality
7	IC4 communication failure	1 byte	
8	EEPROM communication failure	1 byte	
9	Failure in audio	1 byte	
10	Communication failure of the volume IC	1 byte	
11	Backup-ROM communication failure	1 byte	
12	Failure in temperature information (TEMP1)	1 byte	
13	Activation of panel protection	1 byte	0: Panel protection not activated, 1: Panel protection being activated
14	(Reservation)	9 byte	* * * * * * * * *
15	Hour meter	7 byte	1st-5th bytes: Hour, 6-7th bytes: Minute

• Power-down information

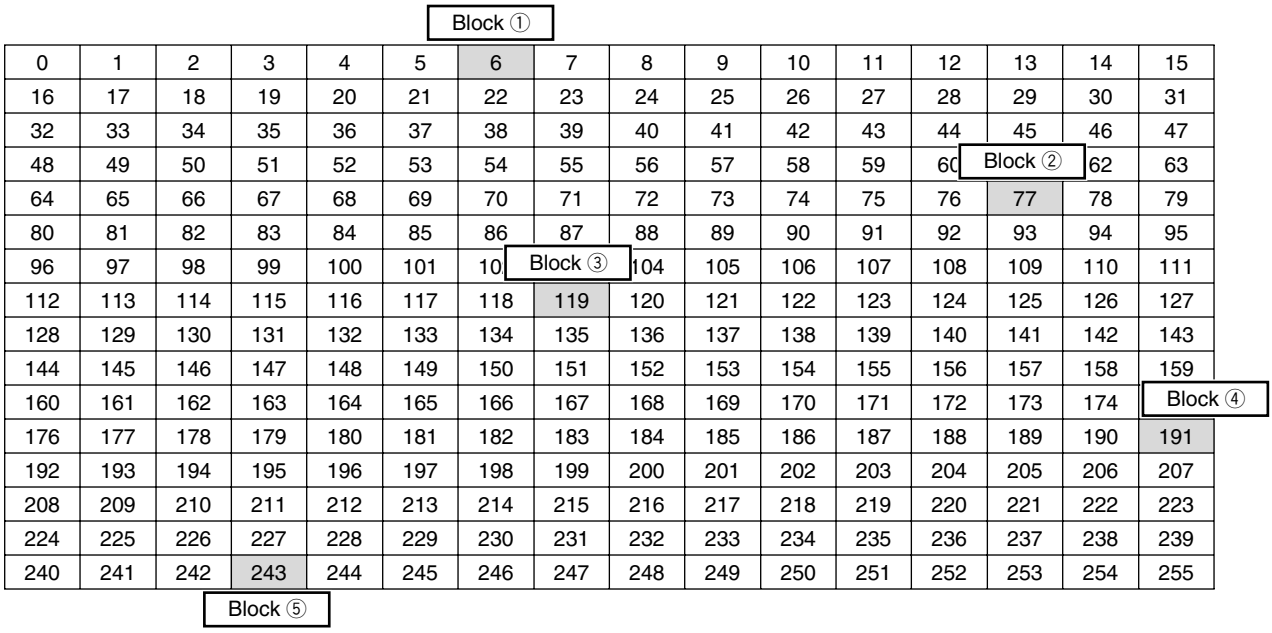
Data	Power-down point
0	No power-down
1	Not used
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	Reservation
E	Reservation
F	Power-down point not identified

GPM: Value of the pulse meter

Order	Data	Size
1	Pulse meter (Block area 1)	10 byte
2	Pulse meter (Block area 2)	10 byte
3	Pulse meter (Block area 3)	10 byte
4	Pulse meter (Block area 4)	10 byte
5	Pulse meter (Block area 5)	10 byte

Note:
The number of electric discharges at each block is displayed. The first digit represents the number of tens of thousands.

[Location of the block areas from which values from the pulse meter are obtained]



0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

GPC: Number of times the power was turned on

Order	Data	Size
1	Power-on counter	8 byte

GAJ: Drive-related adjustment values

Order	Data	Size
1	ABL table currently used	3 byte
2	Upper limit of the power	3 byte
3	Vsus adjustment value	3 byte
4	Vofs adjustment value	3 byte
5	X-SUS-U1 adjustment value (XU1)	3 byte
6	X-SUS-U2 adjustment value (XU2)	3 byte
7	X-SUS-D2 adjustment value (XD2)	3 byte
8	X-SUS-D1 adjustment value (XD1)	3 byte
9	Y-SUS-U1 adjustment value (YU1)	3 byte
10	Y-SUS-U2 adjustment value (YU2)	3 byte
11	Y-SUS-D1-2 adjustment value (YD2)	3 byte
12	Y-SUS-D1-1 adjustment value (YD1)	3 byte
13	Y-SUS-D2-2 adjustment value (YD4)	3 byte
14	Y-SUS-D2-1 adjustment value (YD3)	3 byte

Data	Table
AB1	ABL table for NTSC
AB2	ABL table for PAL, ABL table for PC (48Hz)
AB3	ABL table for PC

LIST OF RS-232C COMMAND

Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
[A]					
ABL	Adjusting power consumption	○	000	255	
ADC	AD CONTRAST adjustment	○	000	255	
AMN	Audio MUTE OFF				
AMY	Audio MUTE ON				
AST	Execution of auto setup				The values for positions are not stored in memory in Factory mode.
[B]					
BCP	Transmitting the backup data to the DIGITAL VIDEO Assy				
BRA	Indicate a current baudrate				
BRAS01	Setting the UART to 232C (1200 bps)				
BRAS02	Setting the UART to 232C (2400 bps)				
BRAS03	Setting the UART to 232C (4800 bps)				
BRAS04	Setting the UART to 232C (9600 bps)				
BRAS05	Setting the UART to 232C (19200 bps)				
BRAS06	Setting the UART to 232C (38400 bps)				
BYG	Adjusting BY GAIN	○	000	255	
[C]					
CNG	MR NG INFORMATION CLEAR				
CPC	Clearing the power-on counter				
CPD	Clearing power-down information				
[D]					
DIN	Turning off the on-screen display				Prohibit OSD indication
DIY	Turning on the on-screen display				While the DIY command is in force, the duration of OSD is unlimited.
DOF	Erasing the currently displayed indications				If another command is received, an OSD is displayed.
DRF	Turning off the power for the drive system				Return to the DRN state by turning the power off
DRN	Turning on the power for the drive system				
DW0	Decresing the adjustment value by 10				
DWn	Decreasing the adjustment value by n (n=1 to 9)				
DWF	Minimizing the adjustment value				
DYN	No D-range correction				
DYY	With D-range correction				
[E]					
EWN	Prohibiting writing of EDID data				
EWY	Permitting writing of EDID data				
[F]					
F48	Video 48-Hz sequence				
F50	Video 50-Hz sequence				
F60	Video 60-Hz sequence				
F61	PC 60-Hz sequence				
F70	PC 70-Hz sequence				
F72	Video 72-Hz sequence				
F75	Video 75-Hz sequence				
FAJ	Determining the adjustment flag of the DIGITAL VIDEO Assy in "adjustment is completed"				
FAN	Turning Service Factory mode off				The OSD equivalent to that usually displayed when the power is turned on is displayed.
FAY	Turning Service Factory mode on				
FCA	Turning fan roll control to auto				
FCM	Maximizing the fan roll control				
FST	Executing FINAL SETUP				
FXO	Selecting audio output fixing				
[G]					
GAJ	Obtaining the adjustment values for the panel				
GMM	Switching the gamma	○	000	007	
GNG	Obtaining the shutdown information				

Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
GNP	Obtaining the serial no.				
GPC	Obtaining the P ON COUNTER value				
GPD	Obtaining power-down information				
GPM	Obtaining the PULSE METER data				
GPP	Obtaining the PD polling log				
GPW	Obtaining the PANEL W/B data				
GS1	Obtaining the version data for each device				
GS2	Obtaining the temperature data and unit state				Data of module microcomputer system
GS4	Obtaining Factory information				
GST	Obtaining the temperature data and unit state				Data of main microcomputer system
GYG	FY GAIN	○	000	255	
[H]					
HMD	Indicating the hour meter				
[I]					
IDC	Clearing the ID				
IDS	Setting the ID	○	(00)	(FF)	
IN1	Switching the main screen to Input 1				
IN2	Switching the main screen to Input 2				
IN3	Switching the main screen to Input 3				
IN4	Switching the main screen to Input 4				
IN5	Switching the main screen to Input 5				
INP	Indicating the input function of current main screen				
INPS01	Switching the main screen to Input 1				
INPS02	Switching the main screen to Input 2				
INPS03	Switching the main screen to Input 3				
INPS04	Switching the main screen to Input 4				
INPS05	Switching the main screen to Input 5				
[L]					
LNN	Prohibiting LOUDNESS				
LNY	Permitting LOUDNESS				
[M]					
M00	Mask mode: OFF				
M01	White: 0 to 100%				
M02	Aging mask				
M03	Aging mask (detection of still picture: OFF)				
M10	RAMP slant 1				
M11	RAMP slant 4				
M12	RAMP slant 1 shifting				
M13	RAMP slant 4 shifting				
M14	V RAMP				
M15	H/V RAMP				
M20	WINDOW-Low: 102 / High: 870				
M21	WINDOW-Low: 102 / High: 1023				
M22	WINDOW-Low: 0 / High: 1023				
M23	WINDOW-High: 1023 (CENTER)				
M24	WINDOW-PEAK WINDOW				
M25	WINDOW-1/7 vertical window				
M26	WINDOW-magenta/green stripe				
M27	WINDOW-green/magenta stripe				
M28	Window (black & white [1 x 8], checkered pattern [for EMG check])				
M29	Window (for W/B adjustment, magenta, yellow)				
M2E	Wiper to prevent phosphor burn				
M2F	Warning mask of cable disconnection (Red and green light alternately)				
M30	COLOR BAR				
M31	Slanted lines				
M51	Raster-white				

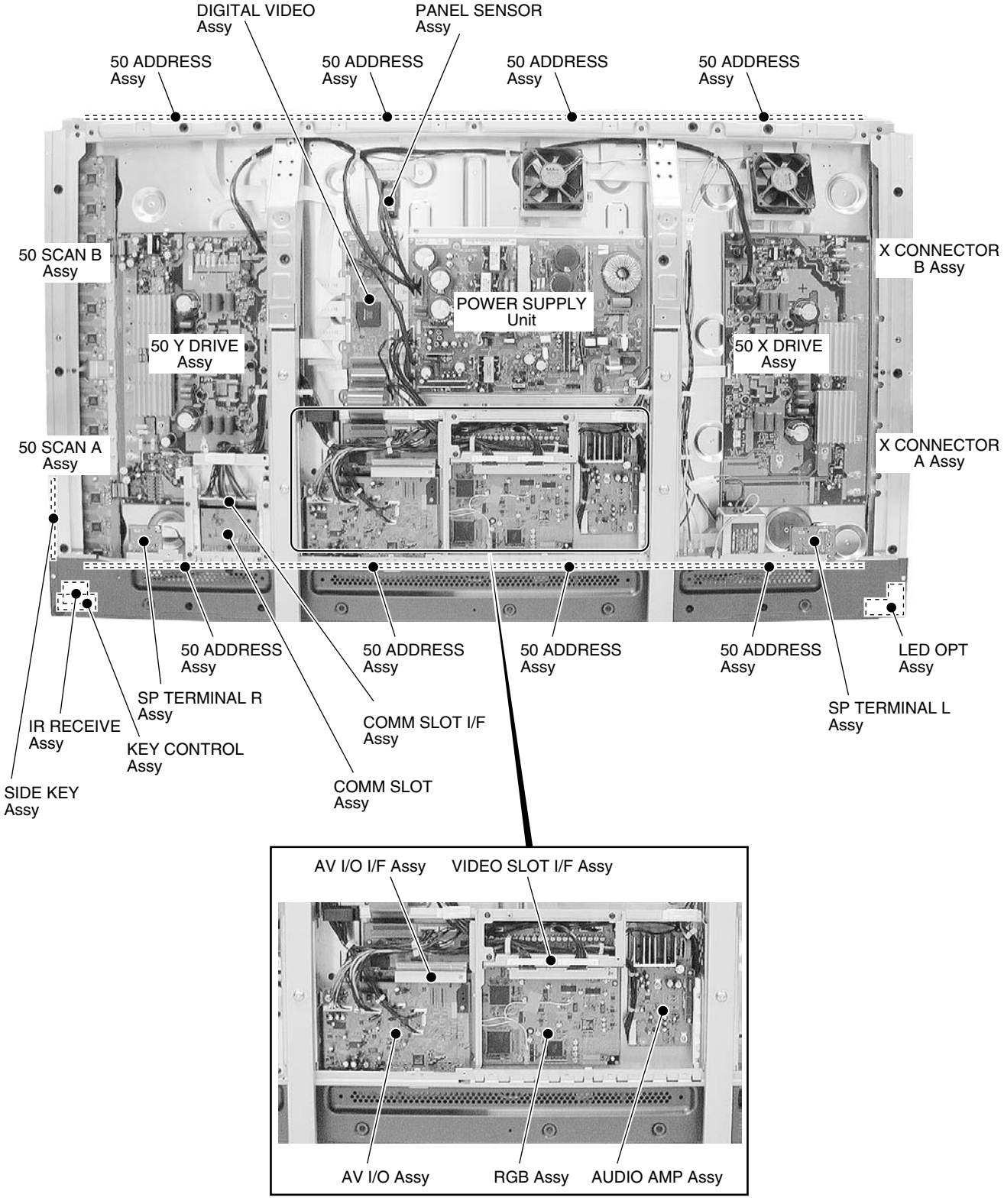
Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
M52	Raster-red				
M53	Raster-green				
M54	Raster-blue				
M55	Raster-black				
M56	Raster-cyan				
M57	Raster-magenta				
M58	Raster-yellow				
M59	Raster-cyan 274				
M60	Raster-50 flesh color				
M61	Raster-50 light purple				
M62	Raster-50 sky blue				
M63	Raster-red 779				
M64	Raster-cyan 218				
M65	Raster-cyan 448				
M66	Raster-43 flesh color				
M67	Raster-red 640				
M68	Raster-magenta 98				
M69	Raster-43 sky blue 1				
M70	Raster-43 sky blue 2				
M71	Raster-43 light purple				
M72	Raster-blue 960				
M73	Raster-yellow 200				
M74	Raster-gray 511 (spare)				
MBG	AD MAIN B GAIN	○	000	255	
MBO	AD MAIN B OFFSET	○	000	255	
MCD	Indicating the current color decoding				
MCDS01	Setting the color decoding to RGB (VIDEO)				
MCDS02	Setting the color decoding to COMPONENT1 (YCbCr)				
MCDS03	Setting the color decoding to COMPONENT2 (YPbPr)				
MGG	AD MAIN G GAIN	○	000	255	
MGO	AD MAIN G OFFSET	○	000	255	
MRG	AD MAIN R GAIN	○	000	255	
MRO	AD MAIN R OFFSET	○	000	255	
MTN	Turning the video mute off				
MTY	Turning the video mute on				
[N]					
NGN	Prohibiting shutdown operation				No writing of the latest data
[P]					
PAF	PEAK LIMITER OFF				
PAN	PEAK LIMITER ON				
PBH	Panel W/B B-HIGH adjustment	○	000	511	
PBL	Panel W/B B-LOW adjustment	○	000	999	
PDN	Do not pass a PD signal through the POWER SUPPLY Unit				
PDY	Pass a PD signal through the POWER SUPPLY Unit				
PGH	Panel W/B G-HIGH adjustment	○	000	511	
PGL	Panel W/B G-LOW adjustment	○	000	999	
PMD	Indicating the pulse meter				
POF	Turning the power OFF				
PRH	Panel W/B R-HIGH adjustment	○	000	511	
PRL	Panel W/B R-LOW adjustment	○	000	999	
[R]					
RYG	RY GAIN	○	000	255	
[S]					
SBG	AD SUB B GAIN	○	000	255	
SBO	AD SUB B OFFSET	○	064	191	
SFT	Indicating the current signal format				

Command	Operation	Validity of Direct Numeric Input	Lower limit	Upper limit	Remarks
SFTS01	Setting the signal format to PC FORMAT1 (VGA or XGA or SXGA or 720-PC)				
SFTS02	Setting the signal format to PC FORMAT2 (WVGA or WXGA or SXGA+)				
SFTS03	Setting the signal format to (VIDEO) 525p or 750p				
SFTS04	Setting the signal format to PC AUTO				
SGG	AD SUB G GAIN	❍	000	255	
SGO	AD SUB G OFFSET	❍	064	191	
SN0	Setting 1, 2, or 3 for the serial number of the panel				
SN1	Setting 4, 5, or 6 for the serial number of the panel				
SN2	Setting 7, 8, or 9 for the serial number of the panel				
SN3	Setting 10, 11, or 12 for the serial number of the panel				
SN4	Setting 13, 14, or 15 for the serial number of the panel				
SRG	AD SUB R GAIN	❍	000	255	
SRO	AD SUB R OFFSET	❍	064	191	
SVL	Adjusting the sub volume	❍	000	020	
SWM	Full-screen display of main output				
SWN	Main/sub displays OFF				
SWS	Full-screen display of sub output				
SZM	Indicating the current screen size setting				
SZMS00	Setting the screen size to Dot by Dot or PARTIAL				
SZMS01	Setting the screen size to 4:3				
SZMS02	Setting the screen size to FULL or FULL1080i				
SZMS03	Setting the screen size to ZOOM				
SZMS04	Setting the screen size to CINEMA				
SZMS05	Setting the screen size to WIDE				
SZMS06	Setting the screen size to FULL1035i				
[U]					
UAJ	Determining the adjustment flag of the DIGITAL VIDEO Assy in "adjustment is completed"				
UP0	Increasing the adjustment value by 10				
UPn	Increasing the adjustment value by n (n=1 to 9)				
UPF	Maximizing the adjustment value				
[V]					
VOF	Offset voltage adjustment	❍	000	255	
VOL	Adjusting the audio volume	❍	000	045	
VRO	Selecting the variable audio output				
VSG	CVY GAIN	❍	064	191	
VSO	Adjusting the CV/YC input with difference in the input	❍	000	255	
VSU	SUS voltage adjustment	❍	000	255	
[X]					
XD1	D1 trailing-edge pulse of X-SUS	❍	000	255	
XD2	D2 trailing-edge pulse of X-SUS	❍	000	255	
XU1	U1 leading-edge pulse of X-SUS	❍	000	255	
XU2	U2 leading-edge pulse of X-SUS	❍	000	255	
[Y]					
YD1	D1 trailing-edge pulse of Y-SUS	❍	000	255	
YD2	D2 trailing-edge pulse of Y-SUS	❍	000	255	
YD3	D3 trailing-edge pulse of Y-SUS	❍	000	255	
YD4	D4 trailing-edge pulse of Y-SUS	❍	000	255	
YU1	U1 leading-edge pulse of Y-SUS	❍	000	255	
YU2	U2 leading-edge pulse of Y-SUS	❍	000	255	

7. GENERAL INFORMATION

7.1 DIAGNOSIS

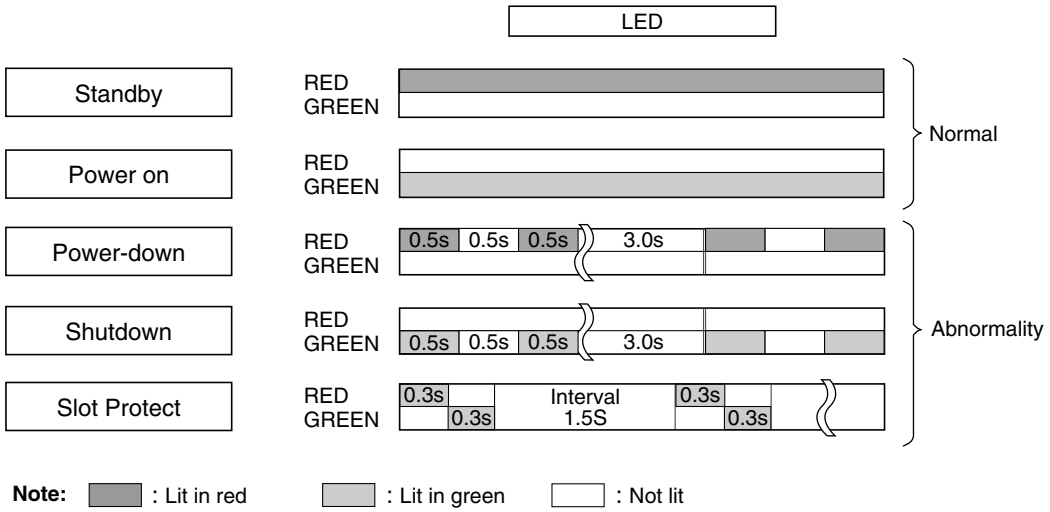
7.1.1 CONFIGURATION OF THE PC BOARD



● **Rear view**

7.1.2 DIAGNOSIS FOR SHUTDOWN AND POWER-DOWN BY LED

• Operation statuses indicated by LEDs



Note: : Lit in red : Lit in green : Not lit

• Identification of locations having abnormality by the number of times the LEDs flash

■ On Shutdown and power-down

Shutdown

• Operation: When the microcomputer detects any abnormality, it forcibly shuts the unit off.

• LED indication: The LED flashes in green.

Note: The LED flashes regardless of the FRONT INDICATOR setting on the Integrator menu.

Power-down

• Operation: When the unit is in emergency status, a protection circuit is activated, and the power is shut off.

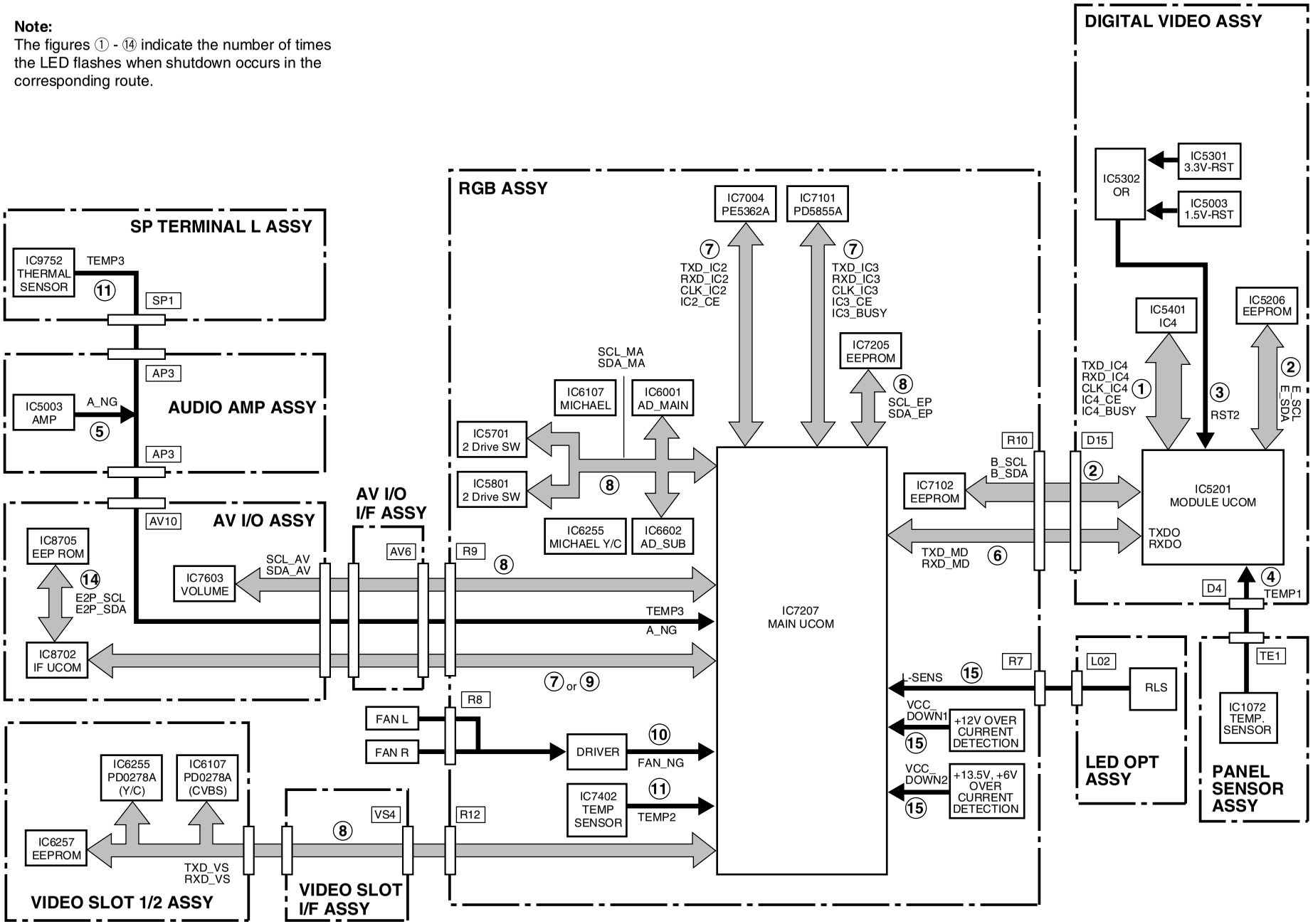
• LED indication: The LED flashes in red.

Category	LED		Content		Unit's Operation	Warning Message
	STB	ON				
SD		Once	Communication failure of the panel-drive IC		Shutdown 3 seconds after warning	Shutdown by circuit failure (01)
		Twice	Communication failure of the module IIC		Shutdown 3 seconds after warning	Shutdown by circuit failure (02)
		3 times	Power decrease of the digital DC-DC converter		Immediate shutdown	
		4 times	Panel having high temperature		Shutdown 30 seconds after warning	Shutdown by warning temperature rise (04)
		5 times	Audio failure		Shutdown 3 seconds after warning	Shutdown by warning speaker failure (05)
		6 times	Communication failure of the module microcomputer		Shutdown 3 seconds after warning	Shutdown by circuit failure (06)
		7 times	Main 3-wire serial communication in failure		Shutdown 3 seconds after warning	Shutdown by circuit failure (07)
		8 times	Communication failure of the main IIC		Shutdown 3 seconds after warning	Shutdown by circuit failure (08)
		9 times	Communication failure of the main microcomputer		Immediate shutdown	
		10 times	Fan in failure		Shutdown 3 seconds after warning	Shutdown by warning fan abnormality (10)
		11 times	Unit having higher temperature		Shutdown 30 seconds after warning	Shutdown by warning temperature rise (11)
		13 times	Main microcomputer ASIC power supply NG		Immediate shutdown	
		14 times	Communication failure of IF-EEPROM		Shutdown 3 seconds after warning	Shutdown by circuit failure (14)
		15 times	Other failure	RLS	Shutdown 30 seconds after warning	Shutdown by circuit failure (15)
				VCC-D1 VCC-D2	Shutdown 3 seconds after warning	
PD	Once					
	Twice		Power		Immediate power-down	
	3 times		SCAN		Immediate power-down	
	4 times		SCAN-5V		Immediate power-down	
	5 times		Y-DRIVE		Immediate power-down	
	6 times		Y-DCDC		Immediate power-down	
	7 times		Y-SUS		Immediate power-down	
	8 times		ADDRESS		Immediate power-down	
	9 times		X-DRIVE		Immediate power-down	
	10 times		X-DCDC		Immediate power-down	
	11 times		X-SUS		Immediate power-down	
	12 times		DIGITAL-DCDC		Immediate power-down	
	15 times		UNKNOWN (Not identified) *		Immediate power-down	

* If the unit cannot identify which protection circuit was activated, even if a power-down had been detected, the red LED may flash 15 times.

• Block diagram of the shutdown signal system

Note:
The figures ① - ⑭ indicate the number of times the LED flashes when shutdown occurs in the corresponding route.



• Diagnosis of shutdown

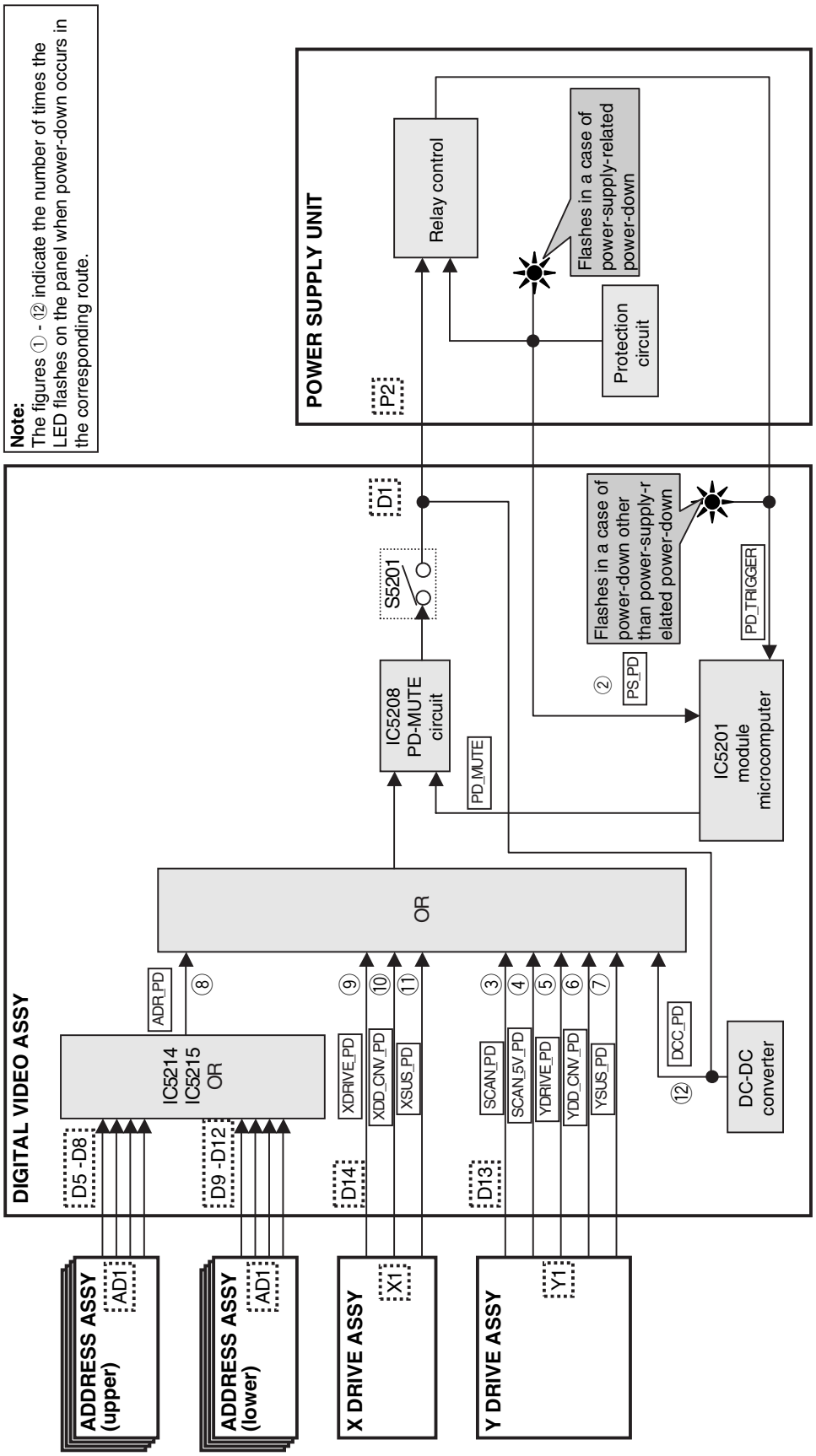
	SD Circuit in Operation	Defective Assy	Reason for Shutdown	Point to be Checked	Possible Defective Part	Remarks
1	Communication failure of the panel-drive IC	DIGITAL VIDEO	Communication failure of IC4 or defective peripheral circuits	IC4 Block, Panel Flash Block	IC5401, IC5305	
			Writing failure of IC4			After turning the unit on again, check if the data on the version can be read with the GS1 command.
2	Communication failure of the module IC (Check the shutdown subcategory on the Factory menu.)	DIGITAL VIDEO	Communication failure of the EEPROM (4k) or defective peripheral circuits	Module Ucom Block	IC5206	
		RGB	Communication failure of the EEPROM (2k) or defective peripheral circuits	IC3 Block	IC7102	
			Defective 114-pin FPC	CN400(D15) - CN7101(R10)	ADY1081	Check if the cable is disconnected or not securely connected.
3	Power decrease of DIGITAL-DC-DC	DIGITAL VIDEO	Defective DC-DC converter	Digital DD Control Block	U5601	Check if 3.3V, 2.5V, and 1.5V are activated (not short-circuited).
		DIGITAL VIDEO	Defective RST IC	Panel Flash Block	IC5301,IC5302,IC5303	
		POWER SUPPLY	No startup of 12 V			
4	Panel having higher temperature	DIGITAL VIDEO	Disconnection of cable	CN5202 - CN1071		
			Panel having higher temperature	Surrounding temperature		Temperature detected by a sensor must not exceed 90°C (TEMP1).
5	Audio failure		Speaker short-circuited	Speaker terminals		Check if the speaker cables are in contact with the chassis, etc.
		AUDIO AMP	Defective AMP IC	Audio Amp	IC5003	
		AUDIO AMP	Disconnection of cable	CN7601(AV1) - CN5001(AP2)		Check if the cable is disconnected or not securely connected.
6	Communication failure of the module microcomputer	DIGITAL VIDEO	Communication failure in the module microcomputer or defective peripheral circuits	Module Ucom Block	IC5201	Check short/open of the communication line (TXDO/RXDO).
			Failure in writing in the module microcomputer	Module Ucom Block	IC5201	
			Defective 114-pin FPC	CN4004(D15) - CN7101(R10)	ADY1081	Check if the cable is disconnected or not securely connected.
7	Serial communication failure of the 3-wire of the main microcomputer	AV I/O	Communication failure in the IF microcomputer or defective peripheral circuits	IF Ucom Block	IC8702	Check short / open of the communication line (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF)
		RGB	Communication failure in the CELIA or defective peripheral circuits	IC2 Block	IC7004	Check short / open of the communication line (TXD_IC2/RXD_IC2/CLK_IC2/CE_IC2)
		RGB	Communication failure in the MIKE or defective peripheral circuits	IC3 Block	IC7101	Check short / open of the communication line (TXD_IC3/RXD_IC3/CLK_IC3/BUSY_IC2/CE_IC3)
		RGB	Failure in writing in the MIKE	IC3 Block	IC7101	
8	IIC communication failure of the main microcomputer (Confirm the SD subcategory in the factory menu)	VIDEO SLOT1 or 2	Failure in MICHAEL Y/C or defective peripheral circuits	IC1 (Y/C) Block	IC6255	
		VIDEO SLOT1 or 2	Failure in MICHAEL CVBS or defective peripheral circuits	IC1 (CVBS) Block	IC6107	
		RGB	Failure in AD MAIN or defective peripheral circuits	Main AD Block	IC6001	
		RGB	Failure in AD SUB or defective peripheral circuits	Sub LPF & AD Block	IC6602	
		RGB	Failure in ROZ or defective peripheral circuits	Bus SW1 Block	IC5701	
		RGB	Failure in ROZ or defective peripheral circuits	Bus SW2 Block	IC5801	
		AV I/O	Failure in VOL IC or defective peripheral circuits	AV I/O Assy	IC7603	
		RGB	Failure in EEPROM or defective peripheral circuits	Main Ucom Block	IC7205	
		VIDEO SLOT1 or 2	Failure in EEPROM or defective peripheral circuits	IC1 (Y/C) Block	IC6257	
			Defective communication line between any of the above devices and the main microcomputer		IC7207	Check short / open of SCL_AV/SDA_AV, SCL_MA/SDA_MA and SCL_EP/SDA_EP

	SD Circuit in Operation		Defective Assy	Reason for Shutdown	Point to be Checked	Possible Defective Part	Remarks
9	Communication failure in main microcomputer		RGB	Communication failure in main microcomputer or defective peripheral circuits	Main Ucom Block	IC7207	Check short / open of communication line (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
			RGB	Failure in writing in the main microcomputer	Main Ucom Block	IC7207	
10	Fan failure		FAN	Failure in the fan motor or fan stopped by attached dust			
			RGB	Disconnection of cable	Relay part between CN7402 (R8) and the wire from the fan		Check if the cable is disconnected or not securely connected.
11	Unit having higher temperature			Use under high temperature	Surrounding/internal		Temperature detected by a sensor must not exceed 65°C (TEMP3) /95°C (TEMP2)
			AUDIO AMP	Disconnection of cable	CN5003(AP3) - CN9702(SP1)		Check if the cable is disconnected or not securely connected.
14	Communication failure in IF EEPROM		AV I/O	Communication failure in EEPROM or defective peripheral circuits	I/F Ucom Block	IC8705	Check short / open of E2P_SCL/E2P_SDA
15	Other failures	RLS	RGB	Disconnection of cable	CN9051(L0) - CN7205(R7)		Check if the cable is disconnected or not securely connected.
		VCC-D1	RGB	Defective circuits in the 12V system			Check for shortcircuits in the 12V system.
		VCC-D2	RGB	Defective circuits in the 13.5V and 6.5V systems.			Check for shortcircuits in the 13.5V and 6.5V systems.

• Diagnosis of abnormalities other than shutdown and power-down

Symptoms	Defective Assy	Abnormal Summary	Point to be Checked	Possible Defective Part	Remarks
No power (LED unlit)		Disconnection of cable	CN7404		Check if the connection between the POWER SUPPLY and RGB assemblies is properly made.
	POWER SUPPLY	STB 3.3 V not started	CN7404(AV1)-11 pin		
	AV I/O	Defective IF microcomputer	IF Ucom Block	IC8702	Check if the oscillation is normal (X8701 = 32 kHz, X8702 = 9.8 MHz) and if RESET is set to H (IC8703).
No power (The LED remains lit in red and does not light in green.)	RGB	Defective main microcomputer	Main Ucom Block	IC7207	If communication with the main microcomputer fails approx. 20 seconds after the AC power is on, the main microcomputer may be defective.
Key input not effective		Disconnection of cable	CN4801 - CN9002 CN9001 - CN8702		Check if the cables are not connected or securely connected.
Remote control unit not effective		Disconnection of cable	CN4901 - CN8901		Check if the cable is not connected or securely connected.
	IR RECEIVE	Defective IR receiver section	IR	U4901	Check if a pulse is output when the key corresponding to Pin 3 of the CN4901 is pressed.
Abnormal screen (Data of every other dot are abnormal)	DIGITAL VIDEO	Defective IC4	IC4 Block	IC5401	Check if an abnormal area in the screen changes when the FPC connected to the address corresponding to the abnormal area is replaced with the one corresponding to the next address.
	ADDRESS				Check that an abnormal area in the screen does not change when the FPC connected to the address corresponding to the abnormal area is replaced with the one corresponding to the next address.
		Defective 114-pin FPC	CN7101 - CN5001	ADY1081	Check if the FPC is broken or not securely connected.

• **Block diagram of the power-down signal system**



• Power-down diagnosis (defective points)

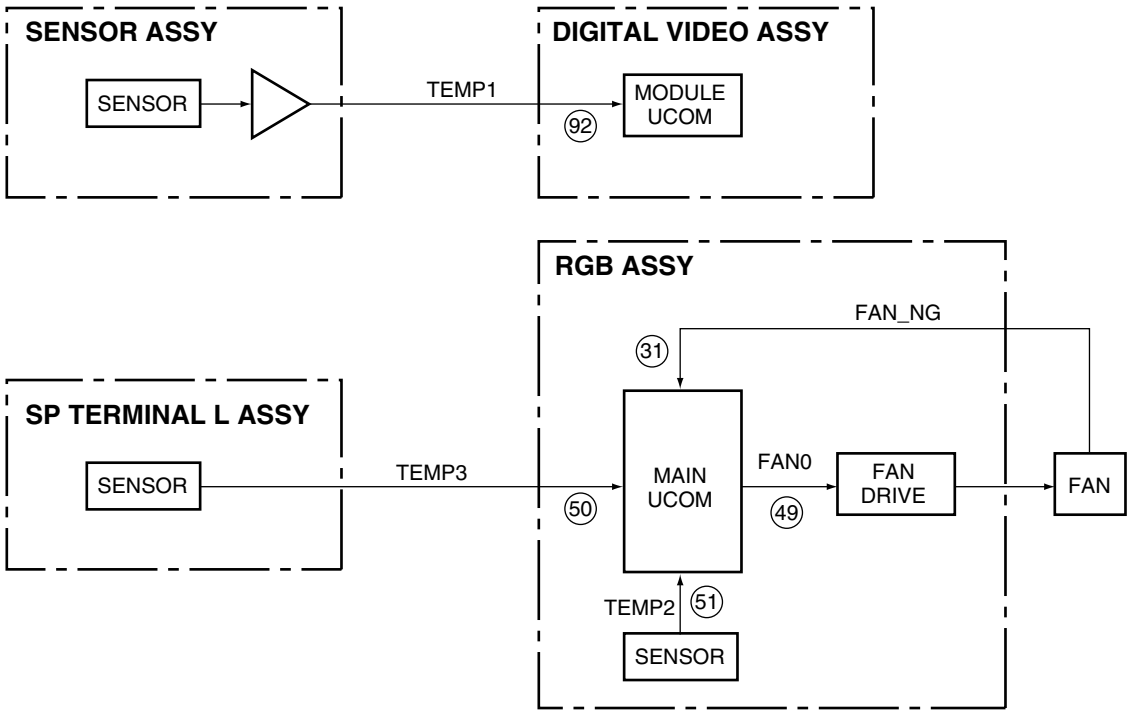
	PD Circuit in operation	Defective Assy	Reason for Power-down	Point to be Checked	Possible Defective Part	Remarks
1	NONE					
2	POWER	POWER SUPPLY Unit				If the elapsed time from relay-on until the LED in the power supply unit lights is about 2-4 seconds, the defective assembly may be the 50 X or Y DRIVE.
		50 X DRIVE Assy	VSUS UVP	X SUS BLOCK	IC1203 - IC1207 (mask module)	
		50 Y DRIVE Assy	VSUS UVP	Y SUS BLOCK	IC2303 - IC2307 (mask module)	
3	SCAN	50 SCAN A, B Assy or Y 43 DRIVE Assy	VH UVP	SCAN IC	SCAN IC	
			VH UVP	VH DC/DC	IC2401, IC2402, IC2410, L2401	
			Disconnection of cable detected	CN2001, CN2301		
4	SCN-5V	50 SCAN A, B Assy or 43 Y DRIVE Assy	Disconnection of cable detected	CN2101, CN2102		
			IC5V UVP	SCAN IC, IC5V DC/DC Y SUS BLOCK	SCAN IC, Q2401, Q2402, IC2304, IC2309	
			IC5V OVP	IC5V DC/DC	IC2403, IC2411	
5	Y-DRIVE	50 Y DRIVE Assy	+16.5V OCP	Y SUS BLOCK	IC2303 - IC2307 (mask module), IC2301, IC2304, R2309	
6	Y-DCDC	50 Y DRIVE Assy	VOFS UVP	VOFS DC/DC	IC2404, IC2412, Q2404, Q2407	
			VOFS OVP	VOFS DC/DC	IC2404, IC2412	
			VH OVP	VH DC/DC	IC2402, IC2410	
7	Y-SUS	50 Y DRIVE Assy	Power-down caused by detection of middle-point voltage	Y RESONANCE BLOCK	Q2202, Q2214, Q2205, Q2206, Q2208, Q2209, Q2211, Q2212, IC2201, IC2202, Control signal series resistors	
		DIGITAL VIDEO Assy	Power-down caused by detection of middle-point voltage	DIGITAL VIDEO Assy	IC5401, Control signal series resistors	
8	ADRS	50 ADDRESS Assy	Disconnection of cable detected	CN1501		
			Power-down caused by detection of a power surge	ADR RESONANCE BLOCK	R1631, Q1601, D1602	
			Power-down caused by detection of middle-point voltage	ADR RESONANCE BLOCK	Q1602, C1609, D1606, D1607	
9	X-DRIVE	50 X DRIVE Assy	Disconnection of cable detected	CN1001, CN1201		
			+16.5V OCP	X SUS BLOCK	IC1203, IC1207 (mask module), IC1204, IC1206, R1230	
			VRN OCP	X SUS BLOCK	Q1205, R1226, R1251	
10	X-DCDC	50 X DRIVE Assy	VRN OVP	VRN DC/DC	IC1403, IC1404	
			VRN UVP	VRN DC/DC	IC1402, IC1403, IC1404	
				X SUS BLOCK	Q1205, R1226, R1251	
11	X-SUS	50 X DRIVE Assy	Power-down caused by detection of middle-point voltage	X RESONANCE BLOCK	Q1102, Q1103, Q1105, Q1106, Q1108, Q1109, Q1111, Q1112, IC1101, IC1102, Control signal series resistors	
		DIGITAL VIDEO Assy	Power-down caused by detection of middle-point voltage	DIGITAL VIDEO Assy	IC5401, Control signal series resistors	
12	DIG-DCDC	DIGITAL VIDEO Assy	DCDC +3.3V, +1.5V OVP	DC DC CONVERTER BLOCK	U5601 (DC DC CONVERTER Module)	

OVP : **O**ver **V**oltage **P**rotection
UVP : **U**nder **V**oltage **P**rotection
OCP : **O**ver **C**urrent **P**rotection

7.1.3 PROCESSING AT THE TIME OF ABNORMALITIES

Fan and temperature sensor

● **Circuitry**



● **Port monitoring specifications**

Port Name	Shutdown Name	Assign	Control Microcomputer	Active	Remarks
FAN_NG	FAN	31	Main	Shutdown when the signal becomes high	Disconnection of the fan connector or abnormality in operation of the fan detected
TEMP1	Unit under high temperature	92	Module	Shutdown when the set value is exceeded	Monitoring high temperature of the panel, Drive system temperature compensation
TEMP2	Unit under high temperature	51	Main		Monitoring high temperature of boards
TEMP3	Unit under high temperature	50	Main		Monitoring ambient temperature

7.1.4 TEMPERATURE COMPENSATION OF DRIVE SYSTEM VOLTAGE

Function: To control the DRIVE-system voltage according to the temperature (Temperature compensation functions such that the voltage is lowered on the lower-temperature side and the voltage becomes higher on the higher-temperature side.)

Purpose: For improving the yield by compensating for the temperature characteristics of the panel

Note: • Temperature compensation is performed only for the VSUS voltage, and not for the VOFS voltage. This compensation is controlled by the software.
• Temperature compensation is carried out with the value of TEMP1.

7.1.5 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

Function: Only the power for the low voltage lines (16 V, 12 V, and 6.5 V) is on, and the power for the high voltage lines (VSUS, VADR) is off.

Usage: 1. Use when only an operational check for the low voltage lines is required, such as when making repairs.
2. Use when rewriting of a program for each microcomputer is required.

Methods: 1 Set the slide switch (S5201) on the DIGITAL VIDEO Assy to its upper position ("DRF" is mentioned on the board see Fig. below).
2. Send the "DRF" RS232C command to turn the large-signal system off.
3. Send the "DRN" RS232C command to turn the large-signal system on.

Notes:
- As the unit enters Power-Down and Muting On mode when Methods 1 and 2 are performed, and power-downs other than those caused by the power (PS_PD) and DC-DC-converter (DIGITAL_DC-DC) circuits are not activated.
- If the slide switch is set from OFF to ON while the power is on, a power-down will occur. Be sure to turn the power off before switching the slide switch.
- Although the "DRF" RS232C command is enabled during Standby, if the power is turned on then turned off, the unit will return to "DRN" mode.

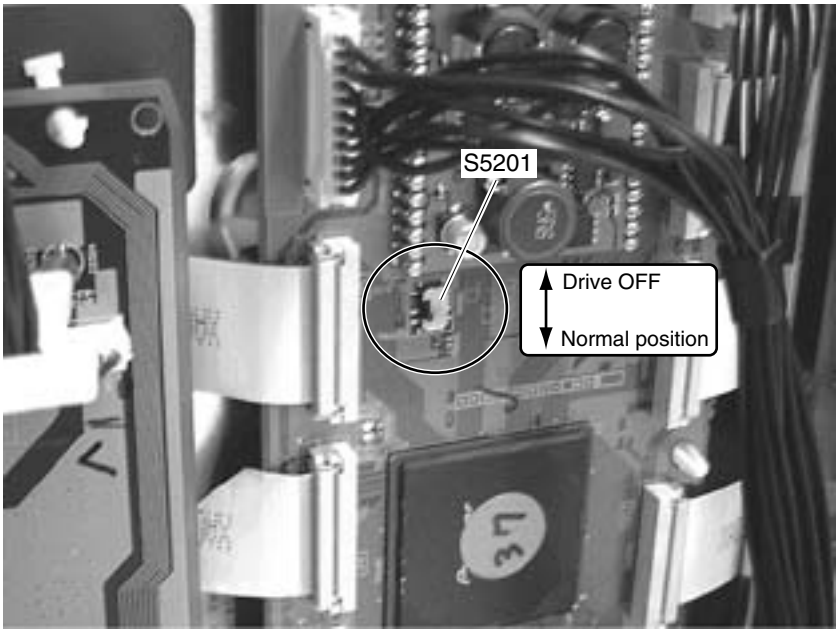


Fig. Drive OFF switch

7.1.6 BACKUP THE ADJUSTMENT VALUES FOR THE MAIN UNIT

■ Outline

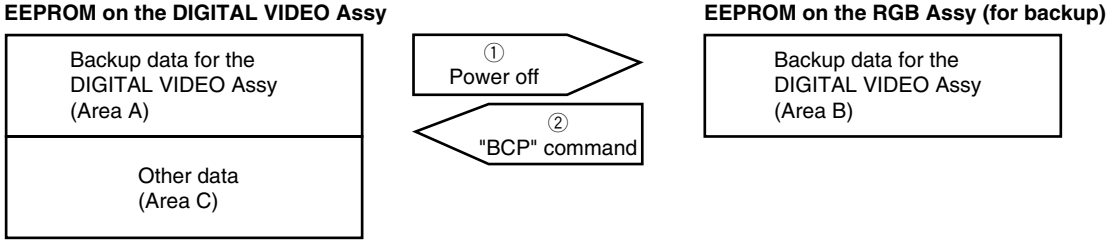
The data on the adjustment values for the main unit are stored in an EEPROM (IC5206, 4 kbits) on the DIGITAL VIDEO Assy. Part of the data (area A in the figure below) are automatically copied to an EEPROM (IC7102, 2 kbits) mounted on the RGB Assy for backup. When the DIGITAL VIDEO Assy is replaced, the backup data on the adjustment values for the main unit stored in the RGB Assy can be copied to the new DIGITAL VIDEO Assy, thus enabling you to omit newly performing adjustments on the main unit. The logs for the product (power-down log, etc.) can also be copied.

■ Data to be backed up in the digital EEPROM (area A)

- Margin adjustment values (Vsus, Vofset)
- Power upper-limit adjustment value (ABL)
- PANEL white-balance adjustment values
  (PANEL-R HIGH, PANEL-G HIGH, PANEL-B HIGH, PANEL-R LOW, PANEL-G LOW, PANEL-B LOW)
- Drive waveform adjustment values
  (X-SUS-U1, X-SUS-U2, X-SUS-D1, X-SUS-D2, Y-SUS-U1, Y-SUS-U2, Y-SUS-D1, Y-SUS-D2, Y-SUS-D3, Y-SUS-D4)
- Hour meter
- Pulse meter
- Number of times the power has been turned on
- PD/SD logs

■ Basic flow of automatic backup

Using a keyword, the data in areas A and B are judged as to whether they have been adjusted or not, then copying is performed.

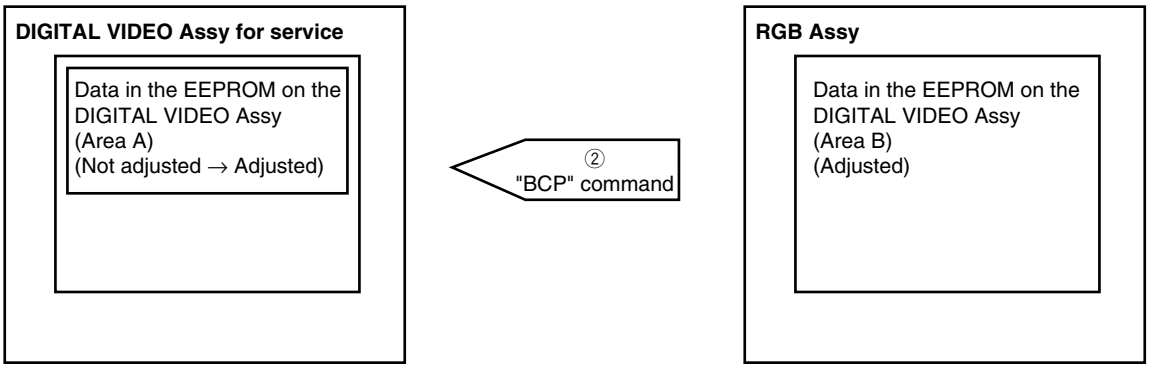


① The keyword on the DIGITAL VIDEO Assy is checked when the power is turned off, and if it is "adjusted", automatic backup is performed.
② If the keyword on the RGB Assy (Area B) is "adjusted," copying can be performed with the "BCP" RS232C command.

■ Actual automatic backup operations

1. When the DIGITAL VIDEO Assy is replaced with an Assy for service

Changing of keywords is not required. Replace the DIGITAL VIDEO Assy with an Assy for service, and send the "BCP" RS232C command. Thus, the backup data in the EEPROM on the RGB Assy are copied to the EEPROM on the DIGITAL VIDEO Assy for service.



2. When a repaired DIGITAL VIDEO Assy is mounted on another unit (reuse of the repaired DIGITAL VIDEO Assy)

The keyword of the DIGITAL VIDEO Assy to be reused must be changed to "not adjusted" using the "UAJ" RS232C command.

Note 1: If a repaired DIGITAL VIDEO Assy is mounted in another unit (Unit 2) without this change of keyword, and the power to the unit 2 is turned off, the data in force before the repair of the DIGITAL VIDEO Assy will be copied to Area B of the RGB Assy of Unit 2, overwriting the data necessary for Unit 2. Once overwritten, the original data will not be restored.

3. When a repaired DIGITAL VIDEO Assy is mounted on the original unit (reuse of the repaired DIGITAL VIDEO Assy)
Changing of keywords is not required. After the repaired DIGITAL VIDEO Assy is mounted in the original unit, the unit can operate with its latest adjustment values.

4. When both the DIGITAL VIDEO Assy and RGB Assy are simultaneously replaced with other assemblies
The automatic backup function of this unit will not work properly.

Note 2: Readjustment of the main unit is required.
Note 3: After readjustment of the main unit, send the "FAJ" RS232C command to change the keyword of the DIGITAL VIDEO Assy to "adjusted." Thus, when the unit is turned off, automatic backup of adjustment data is performed properly.
Note 4: If readjustment of the main unit is totally impossible, it can be omitted by installing the EEPROM (IC5206, 4 kbits) originally mounted on the DIGITAL VIDEO Assy for service.
Note 5: After copying the backup data, turn the power off then back on to reflect the copied backup data.

■ Miscellaneous

If the white balance (W/B) value is largely shifted because of aging, etc., W/B adjustment is required. (As this may be a rare case, the adjustment procedures are described below, just for your reference.

[W/B-adjustment procedures]

The W/B adjustment can be performed with the RS232C commands. Minolta CA-100 color difference meter are required.

① Send the "FAY" RS232C command to enter Factory mode.

② Set the keyword for the DIGITAL VIDEO Assy to "not adjusted" with the "UAJ" RS232C command.

③ Obtain the current adjustment values in the two adjustment tables (see "6.6 Command Description").
- Shifting to Table 1: Send the "M51" and "F60" commands. Obtaining the adjustment values: Send the "GPW" command.
- Shifting to Table 2: Send the "M51" and "F75" commands. Obtaining the adjustment values: Send the "GPW" command.

④ For each table, set the brightness.
- Adjustment in Table 1: After sending the "F60" command, perform adjustment.
- Adjustment in Table 2: After sending the "F75" command, perform adjustment.

For each table, change the RGB parameters so that the values measured using a Minolta color difference meter (CA-100) become as indicated below. In this case, any one of PRH, PGH, or PBH must be set to 256.

	Cd/mm
x	285
y	289

"PRH***" : 000 - 511
"PGH***" : 000 - 511
"PBH***" : 000 - 511

⑤ Check after adjustment
- Shifting to Table 1: Send the "F60" command. Obtaining the adjustment values: Send the "GPW" command.
- Shifting to Table 2: Send the "F75" command. Obtaining the adjustment values: Send the "GPW" command.

Check that the adjustment data have been changed.

⑥ Change the keyword for the DIGITAL VIDEO Assy to "adjusted" by sending the "FAJ" RS232C command.
Note: Use a Minolta CA-100 color difference meter or the equivalent for measurement. Otherwise, the specifications of the product cannot be assured.

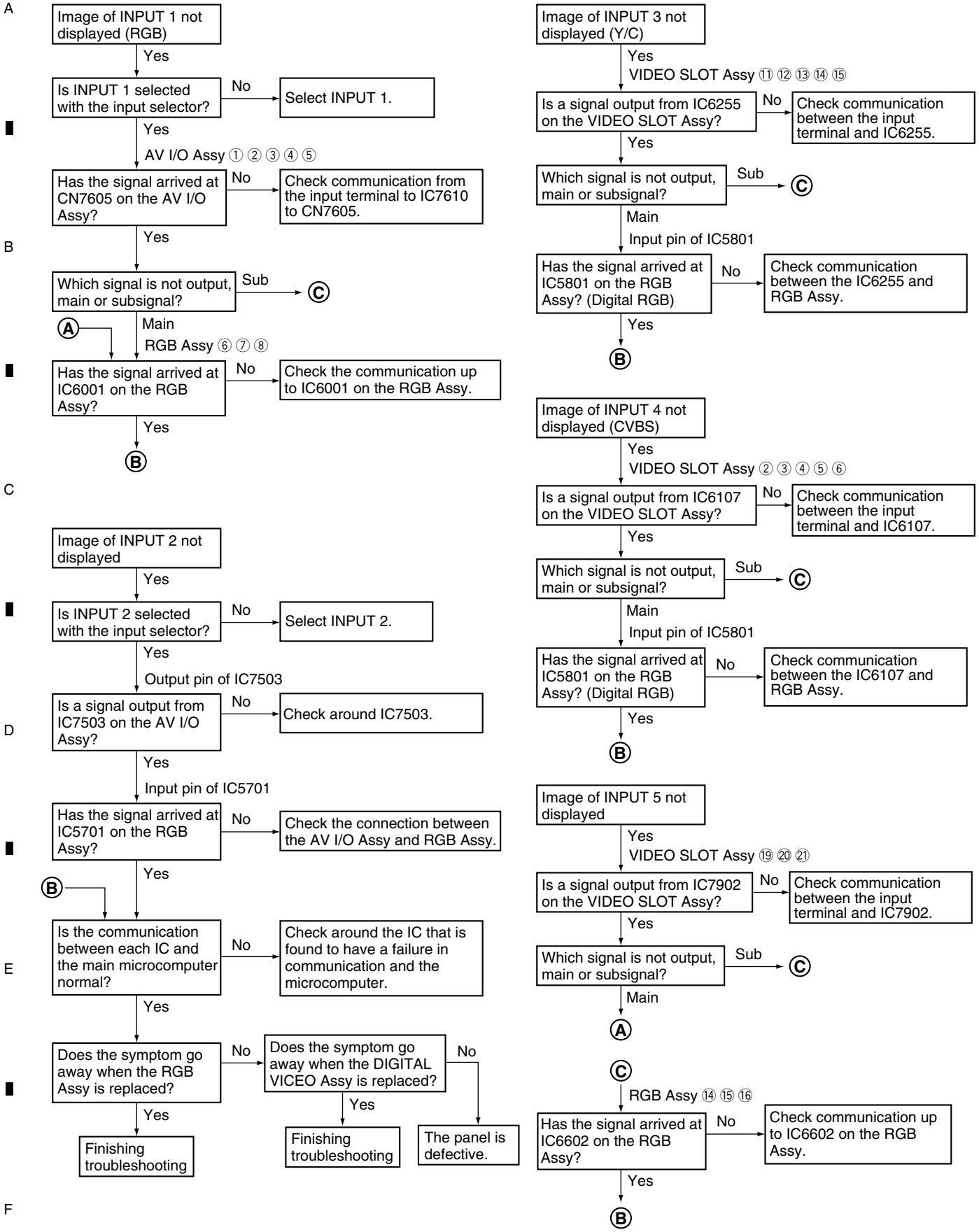
⑦ Send the "FAN" RS232C command to enter Normal mode.
- If the value is different from that you set, readjust it.

Note: To reset the adjustment to its original value, send the "BCP" RS232C command then turn the power off then back on to retrieve the backup data.

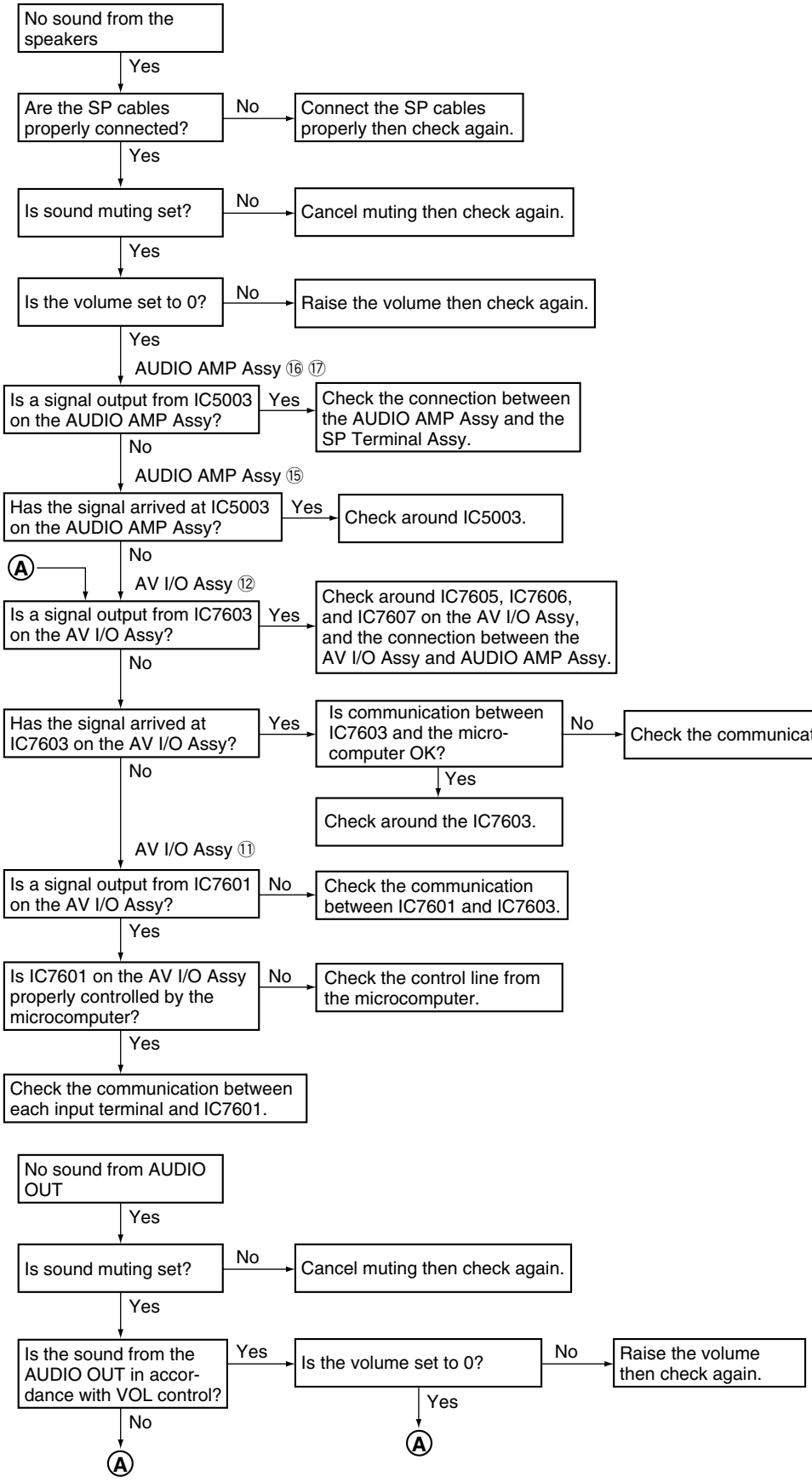
- The setting values for color temperature differ between Factory mode and Normal mode. Therefore, the setting value for color-difference signals in Normal mode are different from those in Factory mode, even after the White Balance adjustment has been performed.

7.1.7 TROUBLESHOOTING

Video



Audio


No sound from the speakers
Yes
Are the SP cables properly connected?
No
Connect the SP cables properly then check again.
Yes
Is sound muting set?
No
Cancel muting then check again.
Yes
Is the volume set to 0?
No
Raise the volume then check again.
Yes
AUDIO AMP Assy ⑯ ⑰
Is a signal output from IC5003 on the AUDIO AMP Assy?
Yes
Check the connection between the AUDIO AMP Assy and the SP Terminal Assy.
No
AUDIO AMP Assy ⑮
Has the signal arrived at IC5003 on the AUDIO AMP Assy?
Yes
Check around IC5003.
No
Ⓐ
AV I/O Assy ⑫
Is a signal output from IC7603 on the AV I/O Assy?
Yes
Check around IC7605, IC7606, and IC7607 on the AV I/O Assy, and the connection between the AV I/O Assy and AUDIO AMP Assy.
No
Has the signal arrived at IC7603 on the AV I/O Assy?
Yes
Is communication between IC7603 and the micro-computer OK?
No
Check the communication line.
Yes
Check around the IC7603.
No
AV I/O Assy ⑪
Is a signal output from IC7601 on the AV I/O Assy?
No
Check the communication between IC7601 and IC7603.
Yes
Is IC7601 on the AV I/O Assy properly controlled by the microcomputer?
No
Check the control line from the microcomputer.
Yes
Check the communication between each input terminal and IC7601.
No sound from AUDIO OUT
Yes
Is sound muting set?
No
Cancel muting then check again.
Yes
Is the sound from the AUDIO OUT in accor-dance with VOL control?
Yes
Is the volume set to 0?
No
Raise the volume then check again.
Yes
Ⓐ
No
Ⓐ

7.1.8 DISASSEMBLY

1 Rear Case (50M), Front Case 504 (CMX)

① Remove the grip by removing the four screws.

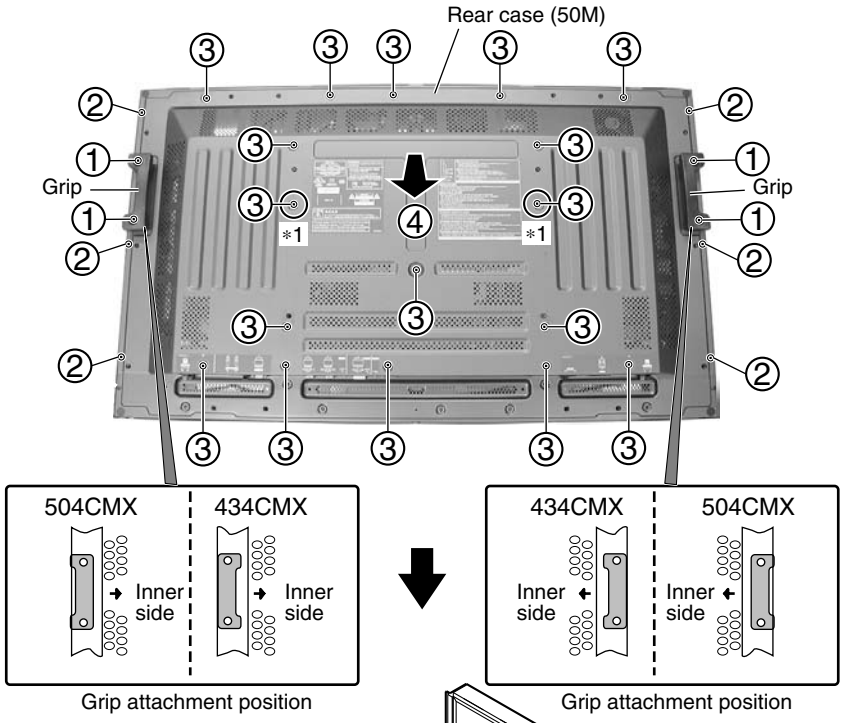
② Remove the six screws.

③ Remove the seventeen screws.

Note :
When reattaching the rear case (50M), first attach the screws for the holes indicated with ∗1 to place the rear case (50M) in the correct position.

④ Remove the rear case (50M).

Note:
When reattaching the grip, be sure to securely tighten the screws.



⑤ Remove the three screws.

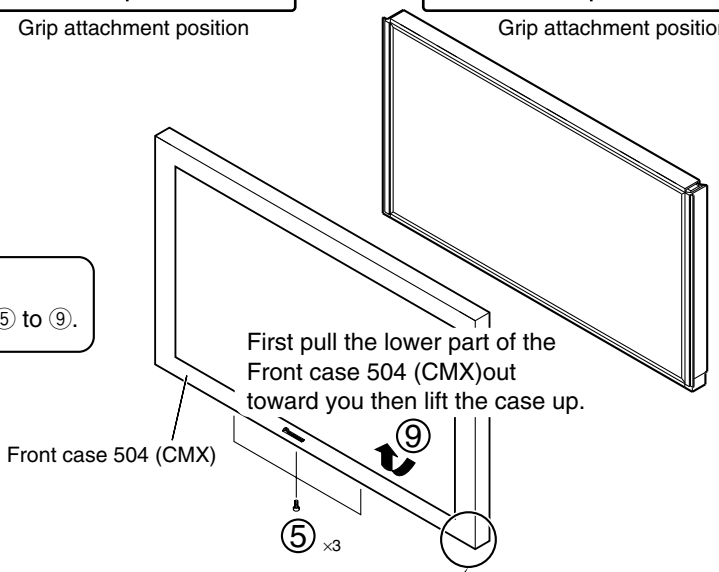
⑥ Remove the one rivet.

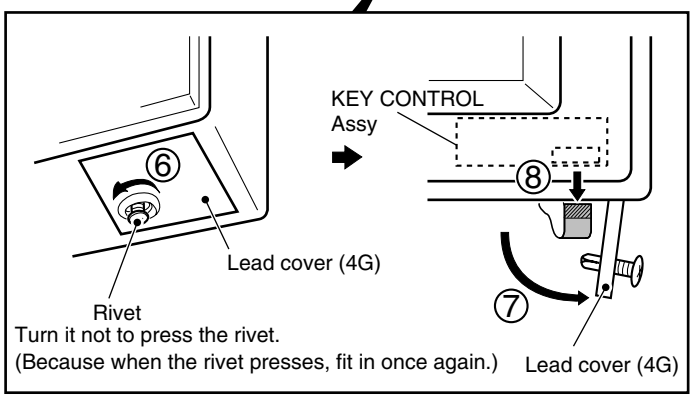
⑦ Remove the lead cover (4G).

⑧ Disconnect the flexible cable.

⑨ Remove the front case 504 (CMX).

Note:
If only the front case must be removed,
without removing the rear case, perform the steps ⑤ to ⑨.

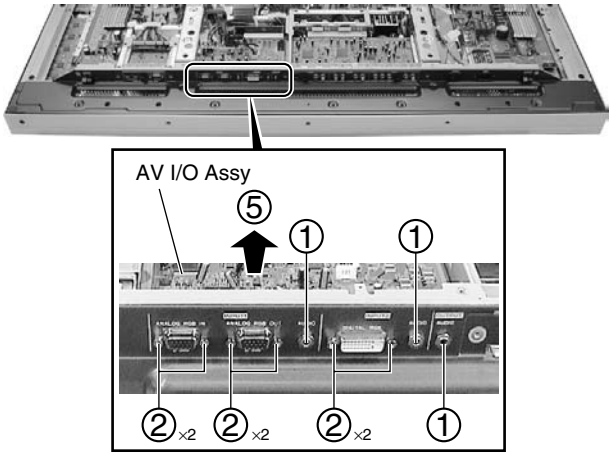




2 Multi Base Section

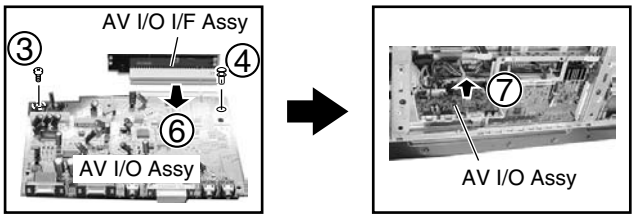
● Diagnosis of AV I/O Assy

① Remove the three nuts.
② Remove the six hexagonal screws.
③ Remove the one screw.
④ Remove the one pin grommet.
⑤ Remove the AV I/O Assy with the AV I/O I/F Assy.



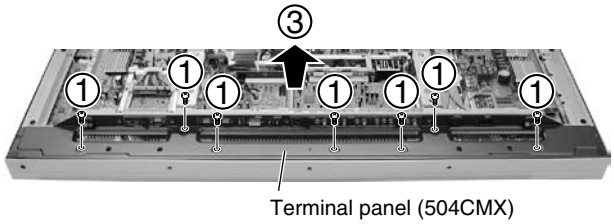
⑥ Remove the AV I/O Assy from the AV I/O I/F Assy.
⑦ Connect the AV I/O Assy to slot of the RGB Assy.

Diagnosis

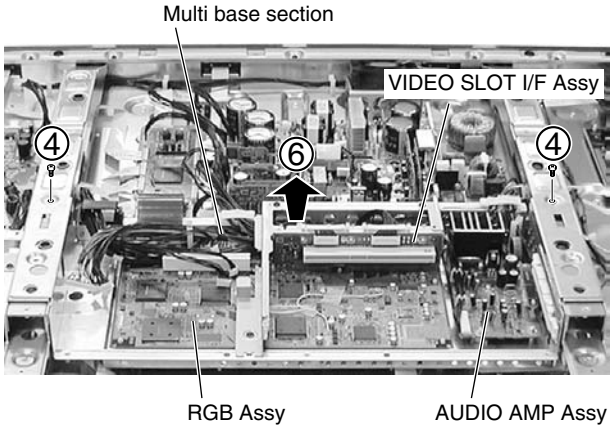


● Removing Multi Base Section

① Remove the seven screws.
② Disconnect the some connectors at need.
③ Remove the terminal panel (504CMX).



④ Remove the two screws.
⑤ Disconnect the some connectors at need.
⑥ Remove the multi base section.



3 X CONNECTOR A Assy, B Assy, 50 SCAN A Assy and B Assy

● X CONNECTOR A and B Assy

① Remove the one nylon rivet.

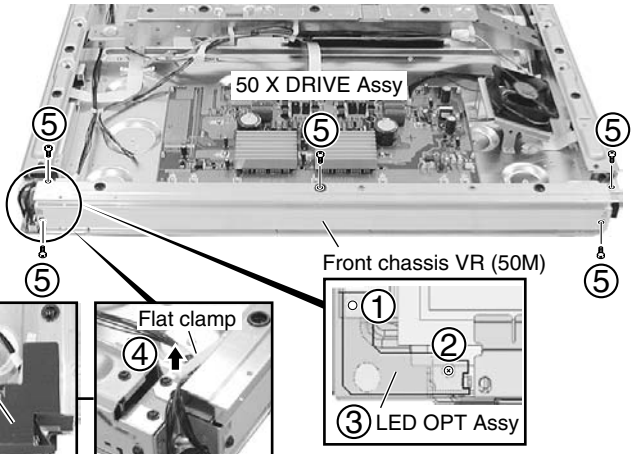
② Remove the one screw.

Note: Be sure to remove this screw. If you don't, the connector on the LED OPT Assy may be damaged.

③ Remove the LED OPT Assy.

④ Remove the jumper wire by removing the flat clamp.

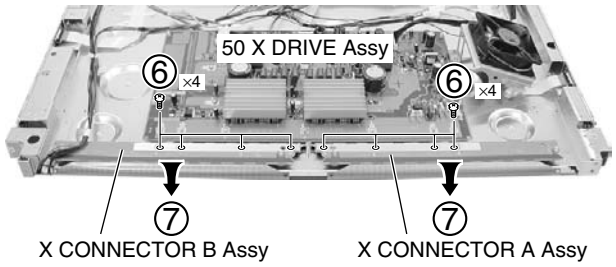
⑤ Remove the front chassis VR (50M) by removing the five screws.



Note:
Enclosure sheet 1 is attached to comply with the safety standards. Make sure that it will not be shifted or peeled off. If it is peeled off, securely reattach it in its original place.

⑥ Remove the eight screws.

⑦ Remove the X CONNECTOR A and B Assy.



Note when reassembling the front chassis VR (50M)
Remove or loosen the screws that secure the panel holder in order not to damage the front protect panel Assy.

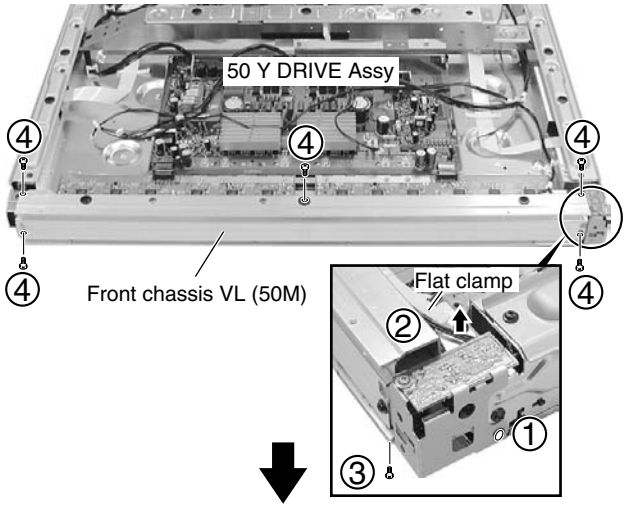
● 50 SCAN A and B Assy

① Remove the one nylon rivet.

② Remove the jumper wire by removing the flat clamp.

③ Remove the one screw.

④ Remove the front chassis VL (50M) by removing the five screws.

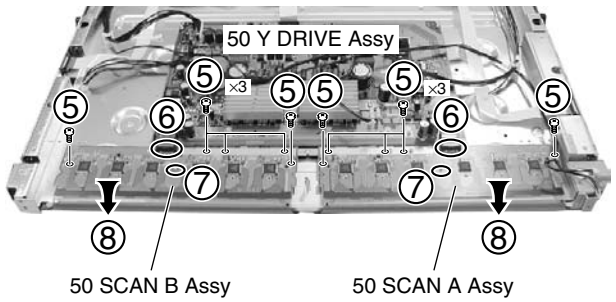


⑤ Remove the ten screws.

⑥ Disconnect the two pin connectors.

⑦ Remove the two spacers.

⑧ Remove the 50 SCAN A and B Assy.



Note when reassembling the front chassis VL (50M)
Remove or loosen the screws that secure the panel holder in order not to damage the front protect panel Assy.

7.2 IC INFORMATIION

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

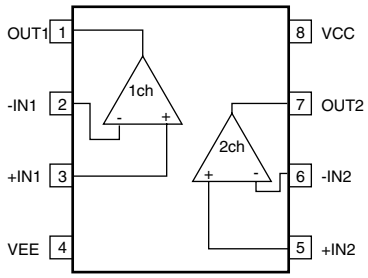
● **List of IC**

BA10393F, BA10358F, STK795-512, STK795-513, AN16003A, MBM29PL160BD-75PFTN, M30626FHPGP-P, PD5856A, AN5870SB, AD9883AKST-110, SM5301BS, BA7078AF, HY57V643220CT-7, MBM29PL3200BE70PFV, CXA3516R, SII1161BCTG100, HY57V161610DTC-8, LA4625

■ BA10393F (50 X DRIVE ASSY : IC1103) (50 Y DRIVE ASSY : IC2211)

• Comparator IC

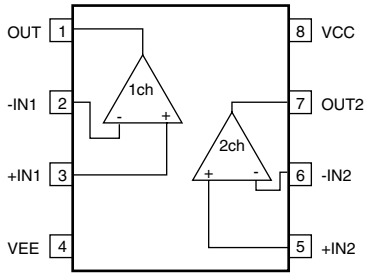
● **Pin Arrangement (Top View) / Block Diagram**



■ BA10358F (50 Y DRIVE ASSY : IC2406)

• Ope-Amp. IC

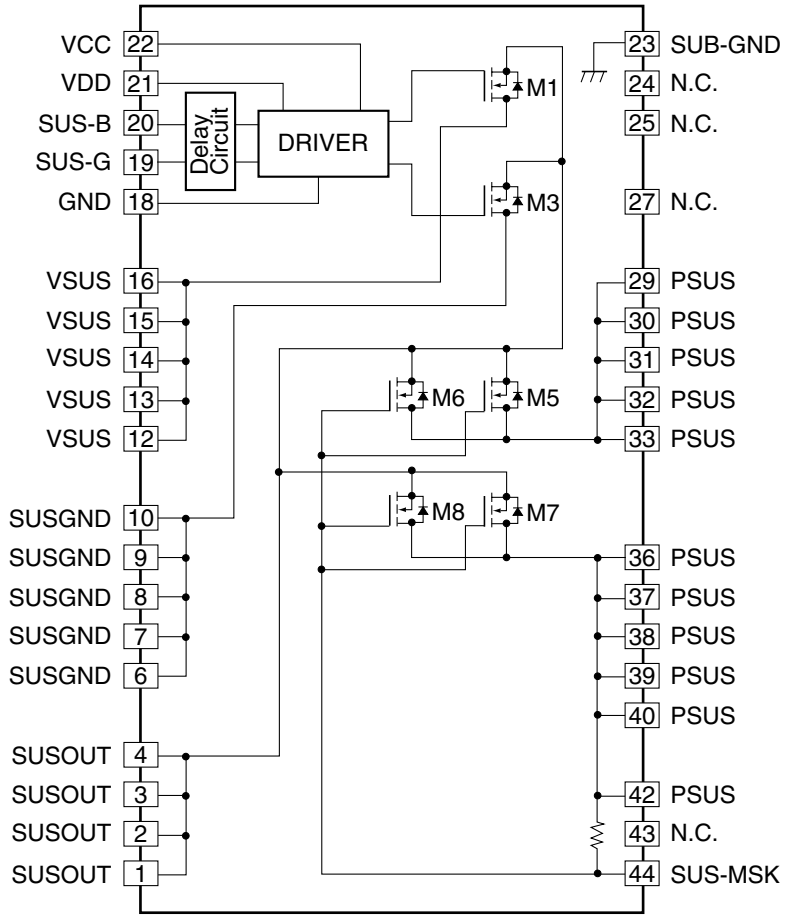
● **Pin Arrangement (Top View) / Block Diagram**



STK795-512 (50 X DRIVE ASSY : IC1203, IC1207)

• PDP Mask Module IC

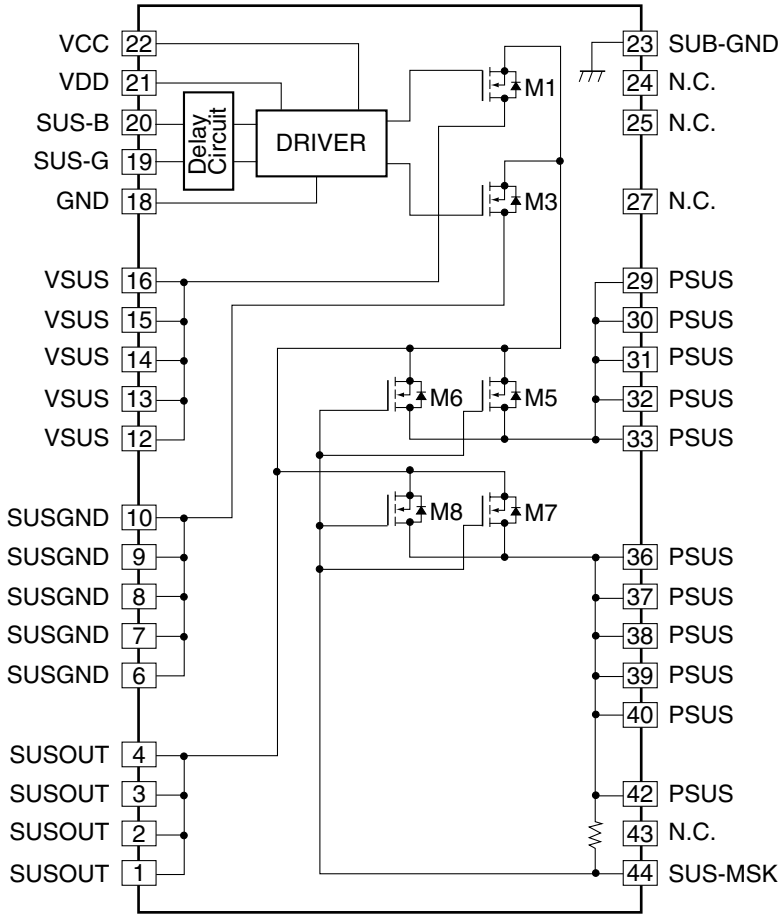
● Block Diagram



STK795-513 (50 Y DRIVE ASSY : IC2303, IC2307)

• PDP Mask Module IC

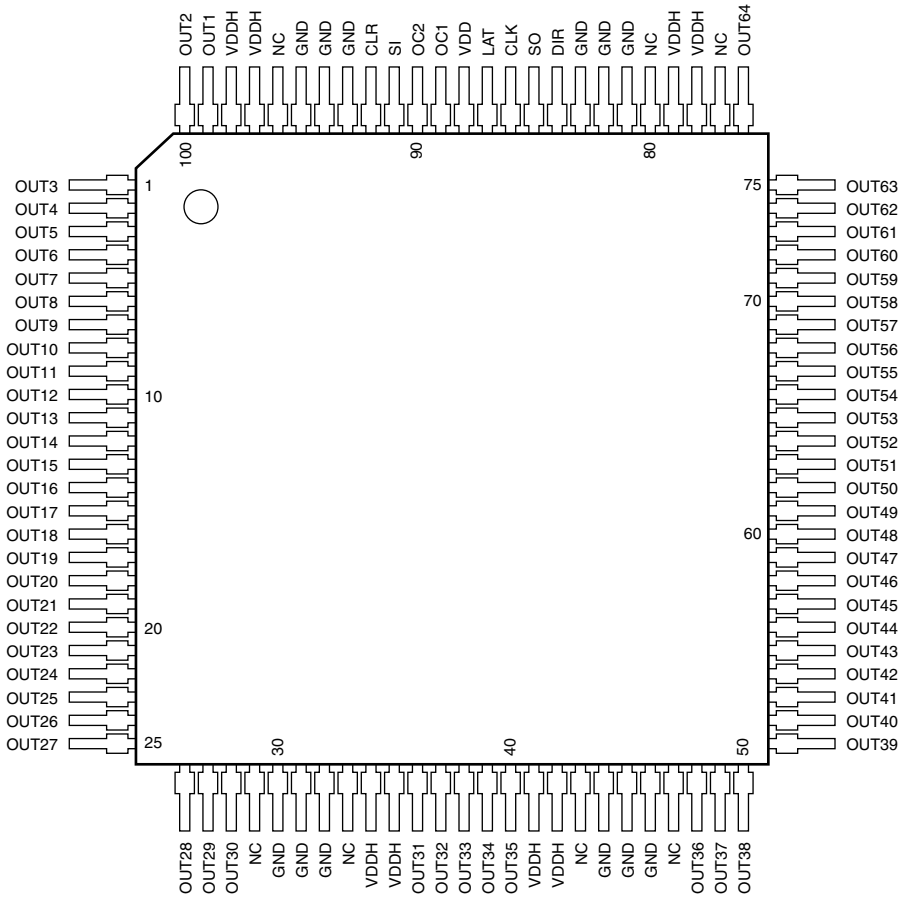
● Block Diagram



■ AN16003A (50 SCAN A ASSY : IC3001 - IC3006) (50 SCAN B ASSY : IC3201 - IC3206)

• Plasma Display Panel IC

● Pin Arrangement (Top View)



● Pin Function

No.	Pin Name	Type	Function
1	OUT3	Output	High-voltage push-pull output pin
2	OUT4		
3	OUT5		
4	OUT6		
5	OUT7		
6	OUT8		
7	OUT9		
8	OUT10		
9	OUT11		
10	OUT12		

No.	Pin Name	Type	Function
11	OUT13	Output	High-voltage push-pull output pin
12	OUT14		
13	OUT15		
14	OUT16		
15	OUT17		
16	OUT18		
17	OUT19		
18	OUT20		
19	OUT21		
20	OUT22		
21	OUT23		
22	OUT24		
23	OUT25		
24	OUT26		
25	OUT27		
26	OUT28		
27	OUT29		
28	OUT30		
29	N.C	–	Not connected
30	GND	Ground	Ground pin
31	GND		
32	GND		
33	N.C	–	Not connected
34	VDDH	Supply	High-voltage circuit supply pin
35	VDDH		
36	OUT31	Output	High-voltage push-pull output pin
37	OUT32		
38	OUT33		
39	OUT34		
40	OUT35		
41	VDDH	Supply	High-voltage circuit supply pin
42	VDDH		
43	N.C	–	Not connected
44	GND	Ground	Ground pin
45	GND		
46	GND		
47	N.C	–	Not connected
48	OUT36	Output	High-voltage push-pull output pin
49	OUT37		
50	OUT38		
51	OUT39		
52	OUT40		
53	OUT41		
54	OUT42		
55	OUT43		
56	OUT44		
57	OUT45		
58	OUT46		
59	OUT47		
60	OUT48		

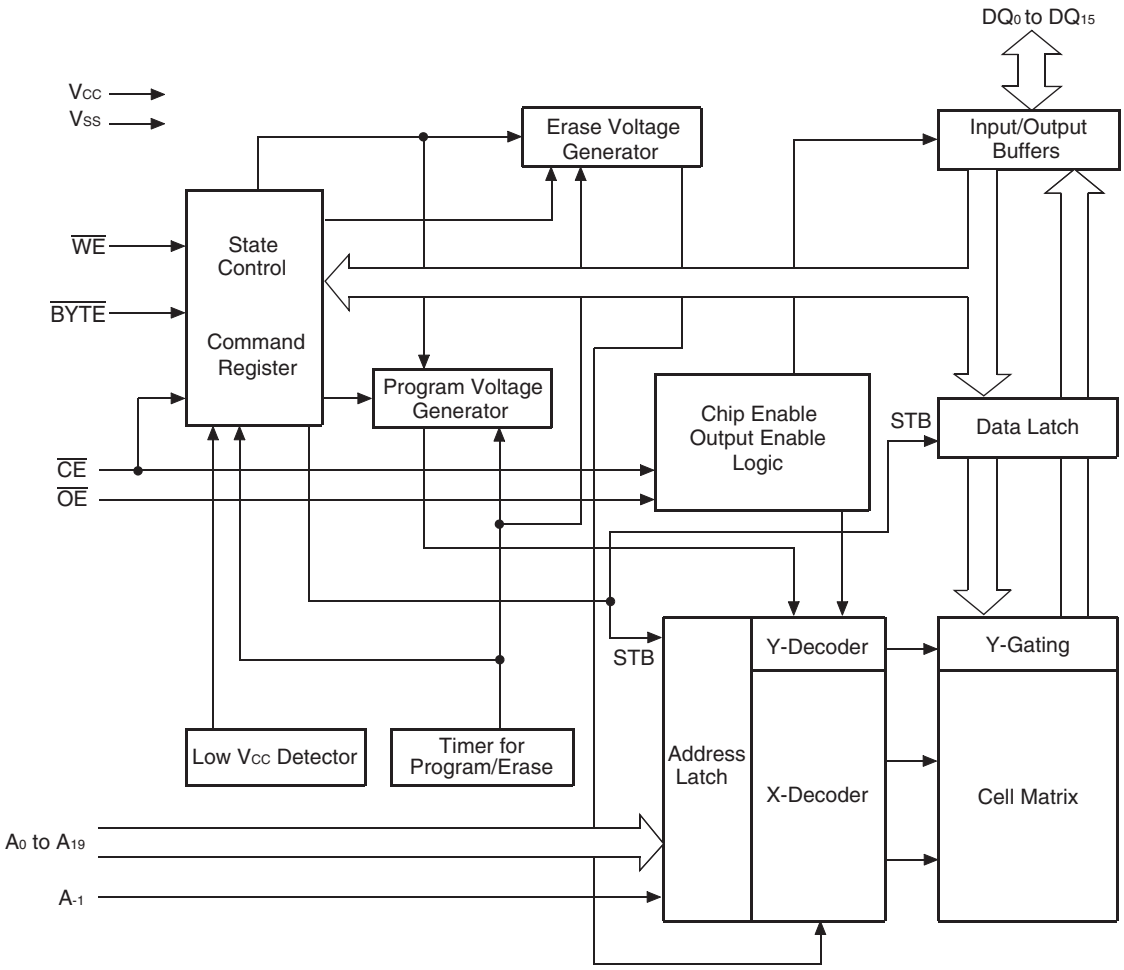
No.	Pin Name	Type	Function
61	OUT49	Output	High-voltage push-pull output pin
62	OUT50		
63	OUT51		
64	OUT52		
65	OUT53		
66	OUT54		
67	OUT55		
68	OUT56		
69	OUT57		
70	OUT58		
71	OUT59		
72	OUT60		
73	OUT61		
74	OUT62		
75	OUT63		
76	OUT64		
77	N.C	–	Not connected
78	VDDH	Supply	High-voltage circuit supply pin
79	VDDH		
80	N.C	–	Not connected
81	GND	Ground	Ground pin
82	GND		
83	GND		
84	DIR	Input	Setup pin of sift register sift direction L: Shift into reverse (SO → SI) H: Shift forward (SI → SO)
85	SO	Input / Output	Serial data input/output pin
86	CLK	Input	Serial clock input pin Fetch SI or SO data to sift register by CLK rise edge
87	LAT	Input	LAT data input pin L: Transfer shft register data to output latch H: Hold data to output latch
88	VDD	Supply	Logic supply pin
89	OC1	Input	Output control pin Control output according to the right truth value table
90	OC2		
91	SI	Input / Output	Serial data input/output pin
92	CLK	Input	All output reset pin CLK pin: L → Normal operation CLK pin: H → All output High
93	GND	Ground	Ground pin
94	GND		
95	GND		
96	N.C	–	Not connected
97	VDDH	Supply	High-voltage circuit supply pin
98	VDDH		
99	OUT1	Output	High-voltage push-pull output pin
100	OUT2		

OC1	OC1	OUT
L	L	ALL HiZ
L	H	DATA
H	L	ALL L
H	H	ALL H

■ MBM29L160BD-75PFTN (DIGITAL VIDEO ASSY : IC5305)

• Flash Memory IC

● Block Diagram



■ M30626FHPGP-P (DIGITAL VIDEO ASSY : IC5201)

• PDP µCOM

● **Pin Function**

No.	Pin Name	Function	I/0	ACTIVE
1	VSUS	[D/A] Vofs power control	O	
2	VOFS	[D/A] Vofs power control	O	
3	TXD_IC4	3 serial communication with IC4MANTA - data transmission	O	
4	RXD_IC4	3 serial communication with IC4MANTA - data receive	I	
5	CLK_IC4	3 serial communication with IC4MANTA - clock output	O	
6	BYTE	(GND connection)	I	
7	CNVSS	Pin for processor mode setting (pull-down)	I	
8	NC	NC pin		
9	NC	NC pin		
10	RST_MD	Reset input	I	L
11	XOUT	Output for main clock	O	–
12	VSS	GND	–	–
13	XIN	Input for main clock	I	–
14	VCC1	Power supply = STB3.3V	–	–
15	NMI	(pull-up)	I	
16	REM_B	(Interruption) Remote control signal input (in the panel unit)	I	
17	KEY_B	(Interruption) Key signal input (in the panel unit)	I	
18	RST2	(Interruption) IC4 reset detection	I	L
19	HD_IN_B	HD signal existence distinction	I	L
20	PD_MUTE	Mute the power down output to the POWER SUPPLY Unit	O	L
21	PS_PD	PD signal in the POWER SUPPLY Unit	I	H
22	DCC_PD	PD signal of DC-DC converter	I	H
23	NC	NC pin		
24	NC	NC pin		
25	VD_IN	V. frequency count	I	L
26	EEPRST	EEPROM power SW	O	H
27	E_SCL	IIC clock output for EEPROM	O	
28	E_SDA	IIC data I/O for EEPROM	I/O	
29	TXD	Communication with flash ROM writer - data transmission	O	
30	RXD	Communication with flash ROM writer - data receive	I	
31	SCLK	Communication with flash ROM writer - clock input	I	
32	BUSY	Communication with flash ROM writer - busy output	O	
33	TXD0	UART communication with main UCOM (external PC) - data transmission	O	
34	RXD0	UART communication with main UCOM (external PC) - data receive	I	
35	NC	NC pin		
36	REQ_MD	Communication request to the main UCOM	O	H
37	PSW_D	Mute of DC-DC converter	O	H
38	WE_IC4	In IC4 (MANTA) rewriting, control for communication path switch	O	H
39	EPM	Setting pin for flash rewriting mode (pull-down)	I	
40	IC4_RST	IC4 forced reset	O	L
41	IC4_CE	Enable for IC4 communication	O	L
42	IC4_BUSY	Busy input for IC4 communication	I	H
43	REQ_IC4	Communication request from the IC4	I	H
44	CE	Setting pin for flash rewriting mode (pull-up)	I	
45	PSIZE	Panel size distinction	I	
46	B_SCL	IIC clock output for backup EEPROM	O	H
47	B_SDA	IIC DATA I/O for backup EEPROM	I/O	H
48	ADR_PD	PD signal of address junction	I	H
49	LED_G	Green LED control	O	L
50	LED_R	Red LED control	O	L

No.	Pin Name	Function	I/0	ACTIVE
51	DRV_OFF	Driving OFF	O	H
52	RELAY	Power ON control output	O	H
53	POWER	Power ON control input	I	H
54	MR_ST_B	MDR connection detection	I	L
55	OP_DET	Rear case open detection	I	
56	NC	NC pin		
57	PNL_MUTE	Panel mute	I	
58	DITHER	PC/VIDEO dither switch (panel module exclusive use)	I	
59	NC	NC pin		
60	VCC2	Power supply = STB 3.3V	–	–
61	PD_TRG	PD detection	I	L
62	VSS	GND	–	–
63	VH_PD	Vh power decrease PD	I	H
64	YDRV_PD	Y drive PD signal	I	H
65	YRES_PD	Y drive PD signal	I	H
66	YDCDC_PD	PD signal of Y drive DC-DC converter	I	H
67	IC5V_PD	5V power decrease PD	I	H
68	XSUS_PD	X drive PD signal	I	H
69	XDCDC_PD	PD signal of X drive DC-DC converter	I	H
70	XDRV_PD	X drive PD signal	I	H
71	NC	NC pin		
72	MR_AC	MR power monitor	I	H
73	AC_DET	AC power monitor at panel side (same signal as CST1)	I	L
74	DVI_MUTE	Mute of panel link output	O	H
75	A_MUTE	Audio mute	O	H
76	A_NG	Audio NG detection	I	L
77	A_SCL	IIC clock output for audio/others	O	L
78	A_SDA	IIC data I/O for audio/others	I/O	L
79	TRUBASS	TRUBASS ON/OFF	O	H
80	STB_SW	Standby setting of audio amp.	O	L
81	FOCUS	FOCUS ON/OFF	O	H
82	SRS	SRS ON/OFF	O	H
83	DDC_WP	DDCROM write protection	O	H
84	DVI_DET	DVI cable disconnection detection	I	H
85	RSTBTMDS	Reset detection of panel link receiver	I	L
86	L_SYNC	DE omission detection of the panel link	I	L
87	NC	NC pin		
88	NC	NC pin		
89	MASK1	[A/D] Mask display setting	I	
90	MAX_PLS2	[A/D] Brightness setting for panel module	I	
91	MAX_PLS1	[A/D] Brightness setting for panel module	I	
92	TEMP	[A/D] AD input for temperature sensor	I	
93	MODE	[A/D] Operation mode setting	I	
94	AVSS	GND for A/D input	–	–
95	MODEL	[A/D] CMX/HD/TV/WX distinction	I	
96	VREF	Reference voltage for A/D input	–	–
97	AVCC	Power supply for A/D input = STB3.3V	–	–
98	NC	NC pin		
99	NC	NC pin		
100	AMG_MD	Address emergency monitor	I	H

■ PD5856A (DIGITAL VIDEO ASSY : IC5401)

• PDP ASIC IC4

● **Pin Function**

Ball No.	No.	Pin Name	Function
A1	1	BAI_6	A phase signal input of B video (sixth bit)
B1	2	BAI_5	A phase signal input of B video (fifth bit)
C1	3	BAI_4	A phase signal input of B video (fourth bit)
D1	4	NC	NC pin
E1	5	NC	NC pin
F1	6	BAI_3	A phase signal input of B video (fifth bit)
G1	7	BAI_2	A phase signal input of B video (fourth bit)
H1	8	FIELD	FIELD signal input
J1	9	XSUSB_12	X-Drive control signal output
K1	10	XSUSB_10	X-Drive control signal output
L1	11	XSUSB_4	X-Drive control signal output
M1	12	XSUSB_0	X-Drive control signal output
N1	13	XSUSA_10	X-Drive control signal output
P1	14	XSUSA_4	X-Drive control signal output
R1	15	XSUSA_2	X-Drive control signal output
T1	16	ADRS_0	Address control signal output
U1	17	AD6TXOUT3M	Address LVDS signal output
V1	18	AD6TXCLKOUTM	Address LVDS signal output
W1	19	AD6TXOUT2M	Address LVDS signal output
Y1	20	AD6TXOUT1M	Address LVDS signal output
AA1	21	AD6TXOUT0M	Address LVDS signal output
AB1	22	AD7TXOUT3M	Address LVDS signal output
AC1	23	AD7TXCLKOUTM	Address LVDS signal output
AD1	24	AD7TXOUT2M	Address LVDS signal output
AE1	25	AD7TXOUT1M	Address LVDS signal output
AF1	26	AD7TXOUT0M	Address LVDS signal output
AF2	27	AD7TXOUT0P	Address LVDS signal output
AF3	28	VSSLA	GND
AF4	29	AD3TXOUT3M	Address LVDS signal output
AF5	30	AD3TXCLKOUTM	Address LVDS signal output
AF6	31	AD3TXOUT2M	Address LVDS signal output
AF7	32	AD3TXOUT1M	Address LVDS signal output
AF8	33	AD3TXOUT0M	Address LVDS signal output
AF9	34	AD2TXOUT3M	Address LVDS signal output
AF10	35	AD2TXCLKOUTM	Address LVDS signal output
AF11	36	AD2TXOUT2M	Address LVDS signal output
AF12	37	AD2TXOUT1M	Address LVDS signal output
AF13	38	AD2TXOUT0M	Address LVDS signal output
AF14	39	AD1TXOUT3M	Address LVDS signal output
AF15	40	AD1TXCLKOUTM	Address LVDS signal output
AF16	41	AD1TXOUT2M	Address LVDS signal output
AF17	42	AD1TXOUT1M	Address LVDS signal output
AF18	43	AD1TXOUT0M	Address LVDS signal output
AF19	44	AD0TXOUT3M	Address LVDS signal output
AF20	45	AD0TXCLKOUTM	Address LVDS signal output
AF21	46	AD0TXOUT2M	Address LVDS signal output
AF22	47	AD0TXOUT1M	Address LVDS signal output
AF23	48	AD0TXOUT0M	Address LVDS signal output
AF24	49	VSSL15	GND
AF25	50	AD4TXOUT3P	Address LVDS signal output

Ball No.	No.	Pin Name	Function
AF26	51	AD4TXOUT3M	Address LVDS signal output
AE26	52	AD4TXCLKOUTM	Address LVDS signal output
AD26	53	AD4TXOUT2M	Address LVDS signal output
AC26	54	AD4TXOUT1M	Address LVDS signal output
AB26	55	AD4TXOUT0M	Address LVDS signal output
AA26	56	AD5TXOUT3M	Address LVDS signal output
Y26	57	AD5TXCLKOUTM	Address LVDS signal output
W26	58	AD5TXOUT2M	Address LVDS signal output
V26	59	AD5TXOUT1M	Address LVDS signal output
U26	60	AD5TXOUT0M	Address LVDS signal output
T26	61	SDIDBI_N	JTAG signal
R26	62	SDIJTAG	JTAG signal
P26	63	GPIO0_3	Microcomputer macro general-purpose port
N26	64	GPIO0_1	Microcomputer macro general-purpose port
M26	65	YSUSA_4	Y-Drive control signal output
L26	66	YSUSA_10	Y-Drive control signal output
K26	67	YSUSA_14	Y-Drive control signal output
J26	68	YSUSB_4	Y-Drive control signal output
H26	69	YSUSB_6	Y-Drive control signal output
G26	70	YSUSB_10	Y-Drive control signal output
F26	71	YSUSB_14	Y-Drive control signal output
E26	72	NC	NC pin
D26	73	NC	NC pin
C26	74	SCAN_10	Scan control signal output
B26	75	CSIOTXD	Communication with microcomputer
A26	76	CSRD_N	Communication with microcomputer
A25	77	CSCS_N0	Communication with microcomputer
A24	78	EXA16	Flash memory address bus
A23	79	EXA15	Flash memory address bus
A22	80	EXA14	Flash memory address bus
A21	81	EXA13	Flash memory address bus
A20	82	EXA12	Flash memory address bus
A19	83	EXA10	Flash memory address bus
A18	84	EXA7	Flash memory address bus
A17	85	EXA1	Flash memory address bus
A16	86	EXDIO_3	Flash memory data bus
A15	87	EXDIO_5	Flash memory data bus
A14	88	EXDIO_11	Flash memory data bus
A13	89	TRNSEND_O	NC pin
A12	90	RBI_5	B phase signal input of R video (fifth bit)
A11	91	RBI_0	B phase signal input of R video (0 bit)
A10	92	GBI_8	B phase signal input of G video (eighth bit)
A9	93	GBI_2	B phase signal input of G video (second bit)
A8	94	BBI_6	B phase signal input of B video (sixth bit)
A7	95	BBI_0	B phase signal input of B video (0 bit)
A6	96	VDI	VD signal input
A5	97	RAI_5	A phase signal input of R video (fifth bit)
A4	98	DCLKI	CLK input
A3	99	GAI_4	A phase signal input of G video (fourth bit)
A2	100	BAI_9	A phase signal input of B video (ninth bit)

Ball No.	No.	Pin Name	Function
B2	101	BAI_8	A phase signal input of B video (eighth bit)
C2	102	BAI_7	A phase signal input of B video (seventh bit)
D2	103	GND	GND
E2	104	NC	NC
F2	105	NC	NC
G2	106	BAI_1	A phase signal input of B video (first bit)
H2	107	XSUSB_15	X-Drive control signal output
J2	108	GND	GND
K2	109	XSUSB_9	X-Drive control signal output
L2	110	XSUSB_3	X-Drive control signal output
M2	111	XSUSA_15	X-Drive control signal output
N2	112	XSUSA_9	X-Drive control signal output
P2	113	GND	GND
R2	114	XSUSA_1	X-Drive control signal output
T2	115	TEST2	Test signal input (Not used)
U2	116	AD6TXOUT3P	Address LVDS signal output
V2	117	AD6TXCLKOUTP	Address LVDS signal output
W2	118	AD6TXOUT2P	Address LVDS signal output
Y2	119	AD6TXOUT1P	Address LVDS signal output
AA2	120	AD6TXOUT0P	Address LVDS signal output
AB2	121	AD7TXOUT3P	Address LVDS signal output
AC2	122	AD7TXCLKOUTP	Address LVDS signal output
AD2	123	AD7TXOUT2P	Address LVDS signal output
AE2	124	AD7TXOUT1P	Address LVDS signal output
AE3	125	VSSLA	GND
AE4	126	AD3TXOUT3P	Address LVDS signal output
AE5	127	AD3TXCLKOUTP	Address LVDS signal output
AE6	128	AD3TXOUT2P	Address LVDS signal output
AE7	129	AD3TXOUT1P	Address LVDS signal output
AE8	130	AD3TXOUT0P	Address LVDS signal output
AE9	131	AD2TXOUT3P	Address LVDS signal output
AE10	132	AD2TXCLKOUTP	Address LVDS signal output
AE11	133	AD2TXOUT2P	Address LVDS signal output
AE12	134	AD2TXOUT1P	Address LVDS signal output
AE13	135	AD2TXOUT0P	Address LVDS signal output
AE14	136	AD1TXOUT3P	Address LVDS signal output
AE15	137	AD1TXCLKOUTP	Address LVDS signal output
AE16	138	AD1TXOUT2P	Address LVDS signal output
AE17	139	AD1TXOUT1P	Address LVDS signal output
AE18	140	AD1TXOUT0P	Address LVDS signal output
AE19	141	AD0TXOUT3P	Address LVDS signal output
AE20	142	AD0TXCLKOUTP	Address LVDS signal output
AE21	143	AD0TXOUT2P	Address LVDS signal output
AE22	144	AD0TXOUT1P	Address LVDS signal output
AE23	145	AD0TXOUT0P	Address LVDS signal output
AE24	146	VSSL15	GND
AE25	147	AD4TXCLKOUTP	Address LVDS signal output
AD25	148	AD4TXOUT2P	Address LVDS signal output
AC25	149	AD4TXOUT1P	Address LVDS signal output
AB25	150	AD4TXOUT0P	Address LVDS signal output

Ball No.	No.	Pin Name	Function
AA25	151	AD5TXOUT3P	Address LVDS signal output
Y25	152	AD5TXCLKOUTP	Address LVDS signal output
W25	153	AD5TXOUT2P	Address LVDS signal output
V25	154	AD5TXOUT1P	Address LVDS signal output
U25	155	AD5TXOUT0P	Address LVDS signal output
T25	156	SDITRST_N	JTAG signal
R25	157	RESETX	Reset input
P25	158	GND	GND
N25	159	GPIO0_0	Microcomputer macro general-purpose port
M25	160	YSUSA_5	Y-Drive control signal output
L25	161	YSUSA_11	Y-Drive control signal output
K25	162	YSUSA_15	Y-Drive control signal output
J25	163	GND	GND
H25	164	YSUSB_7	Y-Drive control signal output
G25	165	YSUSB_11	Y-Drive control signal output
F25	166	NC	NC pin
E25	167	NC	NC pin
D25	168	GND	GND
C25	169	SCAN_11	Scan control signal output
B25	170	CSIORXD	Communication with UCOM
B24	171	CSIOSCKI	Communication with UCOM
B23	172	UARTTXD	Communication with UCOM
B22	173	UARTRXD	Communication with UCOM
B21	174	CSWR_N0	Communication with UCOM
B20	175	GND	GND
B19	176	EXA9	Flash memory address bus
B18	177	EXA6	Flash memory address bus
B17	178	EXA0	Flash memory address bus
B16	179	GND	GND
B15	180	EXDIO_6	Flash memory data bus
B14	181	EXDIO_12	Flash memory data bus
B13	182	RBI_9	B phase signal input of R video (ninth bit)
B12	183	RBI_4	B phase signal input of R video (fourth bit)
B11	184	GND	GND
B10	185	GBI_7	B phase signal input of G video (seventh bit)
B9	186	GBI_1	B phase signal input of G video (first bit)
B8	187	BBI_5	B phase signal input of B video (fifth bit)
B7	188	GND	GND
B6	189	HDI	HD signal input
B5	190	RAI_4	A phase signal input of R video (fourth bit)
B4	191	GAI_9	A phase signal input of G video (ninth bit)
B3	192	GAI_3	A phase signal input of G video (third bit)
C3	193	GAI_2	A phase signal input of G video (second bit)
D3	194	VDDD33	3.3V power supply
E3	195	GAI_1	A phase signal input of G video (first bit)
F3	196	GAI_0	A phase signal input of G video (0 bit)
G3	197	NC	NC pin
H3	198	XSUSB_14	X-Drive control signal output
J3	199	VDDIO	3.3V power supply
K3	200	XSUSB_8	X-Drive control signal output

Ball No.	No.	Pin Name	Function
L3	201	XSUSB_2	X-Drive control signal output
M3	202	XSUSA_14	X-Drive control signal output
N3	203	XSUSA_8	X-Drive control signal output
P3	204	VDDIO	3.3V power supply
R3	205	XSUSA_0	X-Drive control signal output
T3	206	TEST1	Test signal input (Not used)
U3	207	VSSLA	GND
V3	208	VSSLA	GND
W3	209	VSSLA	GND
Y3	210	VSSLA	GND
AA3	211	VSSLA	GND
AB3	212	VSSLA	GND
AC3	213	VSSLA	GND
AD3	214	VSSLA	GND
AD4	215	VSSLA	GND
AD5	216	VSSLA	GND
AD6	217	VSSLA	GND
AD7	218	VSSLA	GND
AD8	219	VSSLA	GND
AD9	220	VSSLA	GND
AD10	221	VSSLA	GND
AD11	222	VSSLA	GND
AD12	223	VSSLA	GND
AD13	224	VSSLA	GND
AD14	225	VSSLA	GND
AD15	226	VSSLA	GND
AD16	227	VSSLA	GND
AD17	228	VSSLA	GND
AD18	229	VSSLA	GND
AD19	230	VSSLA	GND
AD20	231	VSSLA	GND
AD21	232	VSSLA	GND
AD22	233	VSSLA	GND
AD23	234	VSSLA	GND
AD24	235	VSSLA	GND
AC24	236	VSSLA	GND
AB24	237	VSSLA	GND
AA24	238	VSSLA	GND
Y24	239	VSSLA	GND
W24	240	VSSLA	GND
V24	241	VSSLA	GND
U24	242	VSSLA	GND
T24	243	SDITDO	JTAG signal
R24	244	GPIO0_7	Microcomputer macro general-purpose port
P24	245	VDDIO	3.3V power supply
N24	246	YSUSA_0	Y-Drive control signal output
M24	247	YSUSA_6	Y-Drive control signal output
L24	248	YSUSA_12	Y-Drive control signal output
K24	249	YSUSB_0	Y-Drive control signal output
J24	250	VDDD33	3.3V power supply

Ball No.	No.	Pin Name	Function
H24	251	YSUSB_8	Y-Drive control signal output
G24	252	NC	NC pin
F24	253	YSUSB_15	Y-Drive control signal output
E24	254	SCAN_3	Scan control signal output
D24	255	VDDD33	3.3V power supply
C24	256	SCAN_12	Scan control signal output
C23	257	SCAN_13	Scan control signal output
C22	258	SCAN_14	Scan control signal output
C21	259	SCAN_15	Scan control signal output
C20	260	VDDIO	3.3V power supply
C19	261	EXA8	Flash memory address bus
C18	262	EXA5	Flash memory address bus
C17	263	CLKD	CLK input (60MHz)
C16	264	VDDIO	3.3V power supply
C15	265	EXDIO_7	Flash memory data bus
C14	266	EXDIO_13	Flash memory data bus
C13	267	RBI_8	B phase signal input of R video (eighth bit)
C12	268	RBI_3	B phase signal input of R video (third bit)
C11	269	VDDIO	3.3V power supply
C10	270	GBI_6	B phase signal input of G video (sixth bit)
C9	271	GBI_0	B phase signal input of G video (0 bit)
C8	272	BBI_4	B phase signal input of B video (fourth bit)
C7	273	VDDIO	3.3V power supply
C6	274	RAI_9	A phase signal input of R video (ninth bit)
C5	275	RAI_3	A phase signal input of R video (third bit)
C4	276	GAI_8	A phase signal input of G video (eighth bit)
D4	277	GAI_7	A phase signal input of G video (seventh bit)
E4	278	GAI_6	A phase signal input of G video (sixth bit)
F4	279	GAI_5	A phase signal input of G video (fifth bit)
G4	280	VCMP	GND
H4	281	XSUSB_13	X-Drive control signal output
J4	282	XSUSB_11	X-Drive control signal output
K4	283	XSUSB_7	X-Drive control signal output
L4	284	XSUSB_1	X-Drive control signal output
M4	285	XSUSA_13	X-Drive control signal output
N4	286	XSUSA_7	X-Drive control signal output
P4	287	XSUSA_3	X-Drive control signal output
R4	288	ADRS_3	Address control signal output
T4	289	TESTAN	Test signal input (Not used)
U4	290	VDDLA	3.3V power supply
V4	291	VDDLA	3.3V power supply
W4	292	VDDLA	3.3V power supply
Y4	293	VDDLA	3.3V power supply
AA4	294	VDDLA	3.3V power supply
AB4	295	VDDLA	3.3V power supply
AC4	296	VDDLA	3.3V power supply
AC5	297	VDDLA	3.3V power supply
AC6	298	VDDLA	3.3V power supply
AC7	299	VDDLA	3.3V power supply
AC8	300	VDDLA	3.3V power supply

Ball No.	No.	Pin Name	Function
AC8	300	VDDLA	3.3V power supply
AC9	301	VDDLA	3.3V power supply
AC10	302	VDDLA	3.3V power supply
AC11	303	VDDLA	3.3V power supply
AC12	304	VDDLA	3.3V power supply
AC13	305	VDDLA	3.3V power supply
AC14	306	VDDBG	3.3V power supply
AC15	307	VDDLA	3.3V power supply
AC16	308	VDDLA	3.3V power supply
AC17	309	VDDLA	3.3V power supply
AC18	310	VDDLA	3.3V power supply
AC19	311	VDDLA	3.3V power supply
AC20	312	VDDLA	3.3V power supply
AC21	313	VDDLA	3.3V power supply
AC22	314	VDDLA	3.3V power supply
AC23	315	VDDLA	3.3V power supply
AB23	316	VDDLA	3.3V power supplyv
AA23	317	VDDLA	3.3V power supply
Y23	318	VDDLA	3.3V power supply
W23	319	VDDLA	3.3V power supply
V23	320	VDDLA	3.3V power supply
U23	321	VDDLA	3.3V power supply
T23	322	SDITDI	JTAG signal
R23	323	GPIO0_6	Microcomputer macro general-purpose port
P23	324	GPIO0_2	Microcomputer macro general-purpose port
N23	325	YSUSA_1	Y-Drive control signal output
M23	326	YSUSA_7	Y-Drive control signal output
L23	327	YSUSA_13	Y-Drive control signal output
K23	328	YSUSB_1	Y-Drive control signal output
J23	329	YSUSB_5	Y-Drive control signal output
H23	330	YSUSB_9	Y-Drive control signal output
G23	331	VCMP	GND
F23	332	SCAN_0	Scan control signal output
E23	333	SCAN_4	Scan control signal output
D23	334	SCAN_7	Scan control signal output
D22	335	SCAN_8	Scan control signal output
D21	336	SCAN_9	Scan control signal output
D20	337	EXA11	Flash memory address bus
D19	338	EXA19	Flash memory address bus
D18	339	EXA4	Flash memory address bus
D17	340	EXDIO_0	Flash memory data bus
D16	341	EXDIO_4	Flash memory data bus
D15	342	EXDIO_8	Flash memory data bus
D14	343	EXDIO_14	Flash memory data bus
D13	344	RBI_7	B phase signal input of R video (seventh bit)
D12	345	RBI_2	B phase signal input of R video (second bit)
D11	346	GBI_9	B phase signal input of G video (ninth bit)
D10	347	GBI_5	B phase signal input of G video (fifth bit)
D9	348	BBI_9	B phase signal input of B video (ninth bit)
D8	349	BBI_3	B phase signal input of B video (tenth bit)

Ball No.	No.	Pin Name	Function
D7	350	DEI	DE signal input
D6	351	RAI_8	A phase signal input of R video (eighth bit)
D5	352	RAI_2	A phase signal input of R video (second bit)
E5	353	RAI_1	A phase signal input of R video (first bit)
F5	354	RAI_0	A phase signal input of R video (0 bit)
G5	355	BAI_0	A phase signal input of B video (0 bit)
H5	356	VSS15	GND
J5	357	VDDHR	3.3V power supply
K5	358	XSUSB_6	X-Drive control signal output
L5	359	VSSD15	GND
M5	360	XSUSA_12	X-Drive control signal output
N5	361	XSUSA_6	X-Drive control signal output
P5	362	VSS15	GND
R5	363	ADRS_2	Address control signal output
T5	364	TESTBN	Test signal input (Not used)
U5	365	VSSL15	GND
V5	366	VSSLA	GND
W5	367	VSSLA	GND
Y5	368	VSSL15	GND
AA5	369	VDDLP	3.3V power supply
AB5	370	VSSL15	GND
AB6	371	VSSLA	GND
AB7	372	VSSLA	GND
AB8	373	VSSL15	GND
AB9	374	VSSLA	GND
AB10	375	VSSLA	GND
AB11	376	VSSL15	GND
AB12	377	VSSLA	GND
AB13	378	VSSLA	GND
AB14	379	REFRIN	Reference current generation
AB15	380	VSSBG	GND
AB16	381	VSSL15	GND
AB17	382	VSSLA	GND
AB18	383	VSSLA	GND
AB19	384	VSSL15	GND
AB20	385	VSSLA	GND
AB21	386	VSSLA	GND
AB22	387	VSSLA	GND
AA22	388	VDDLA	3.3V power supply
Y22	389	VSSL15	GND
W22	390	VSSLA	GND
V22	391	VSSLA	GND
U22	392	VSSL15	GND
T22	393	SDITMS	JTAG signal
R22	394	GPIO0_5	Microcomputer macro general-purpose port
P22	395	VSS15	GND
N22	396	YSUSA_2	Y-Drive control signal output
M22	397	YSUSA_8	Y-Drive control signal output
L22	398	VSSD15	GND
K22	399	YSUSB_2	Y-Drive control signal output

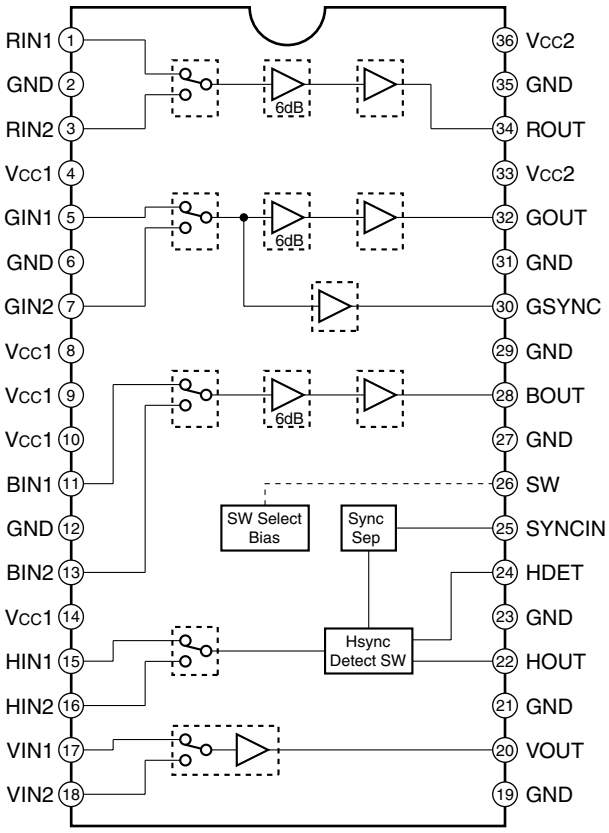
Ball No.	No.	Pin Name	Function
J22	400	VDDHL	3.3V power supply
H22	401	VSSD15	GND
G22	402	YSUSB_12	Y-Drive control signal output
F22	403	SCAN_1	Scan control signal output
E22	404	SCAN_5	Scan control signal output
E21	405	SCAN_6	Scan control signal output
E20	406	VSS15	GND
E19	407	EXA18	Flash memory address bus
E18	408	EXA3	Flash memory address bus
E17	409	EXDIO_1	Flash memory data bus
E16	410	VSS15	GND
E15	411	EXDIO_9	Flash memory data bus
E14	412	EXDIO_15	Flash memory data bus
E13	413	RBI_6	B phase signal input of R video (sixth bit)
E12	414	CLKS	CLK input (85MHz)
E11	415	VSS15	GND
E10	416	GBI_4	B phase signal input of G video (fourth bit)
E8	418	BBI_2	B phase signal input of B video (second bit)
E9	417	BBI_8	B phase signal input of B video (eighth bit)
E7	419	VSS15	GND
E6	420	RAI_7	A phase signal input of R video (seventh bit)
F6	421	RAI_6	A phase signal input of R video (sixth bit)
G6	422	APL_DT	APL value trigger input
H6	423	VDD15	1.5V power supply
J6	424	VBB	VBB power monitor in the DRAM
K6	425	XSUSB_5	X-Drive control signal output
L6	426	VDDD15	1.5V power supply
M6	427	XSUSA_11	X-Drive control signal output
N6	428	XSUSA_5	X-Drive control signal output
P6	429	VDD15	1.5V power supply
R6	430	ADRS_1	Address control signal output
T6	431	TESTCN	Test signal input (Not used)
U6	432	VDDL15	1.5V power supply
V6	433	VDDLA	3.3V power supply
W6	434	VDDLA	3.3V power supply
Y6	435	VDDL15	1.5V power supply
AA6	436	VDDLA	3.3V power supply
AA7	437	VDDLA	3.3V power supply
AA8	438	VDDL15	1.5V power supply
AA9	439	VDDLA	3.3V power supply
AA10	440	VDDLA	3.3V power supply
AA11	441	VDDL15	1.5V power supply
AA12	442	VDDLA	3.3V power supply
AA13	443	VDDLA	3.3V power supply
AA14	444	VDDLA	3.3V power supply
AA15	445	VDDLA	3.3V power supply
AA16	446	VDDL15	1.5V power supply
AA17	447	VDDLA	3.3V power supply
AA18	448	VDDLA	3.3V power supply
AA19	449	VDDL15	1.5V power supply

Ball No.	No.	Pin Name	Function
AA20	450	VDDLA	3.3V power supply
AA21	451	VDDLA	3.3V power supply
Y21	452	VDDL15	1.5V power supply
W21	453	VDDLA	3.3V power supply
V21	454	VDDLA	3.3V power supply
U21	455	VDDL15	1.5V power supply
T21	456	SDITCK	JTAG signal
R21	457	GPIO0_4	Microcomputer macro general-purpose port
P21	458	VDD15	1.5V power supply
N21	459	YSUSA_3	Y-Drive control signal output
M21	460	YSUSA_9	Y-Drive control signal output
L21	461	VDDD15	1.5V power supply
K21	462	YSUSB_3	Y-Drive control signal output
J21	463	VBB	VBB power monitor in the DRAM
H21	464	VDDD15	1.5V power supply
G21	465	YSUSB_13	Y-Drive control signal output
F21	466	SCAN_2	Scan control signal output
F20	467	VDD15	1.5V power supply
F19	468	EXA17	Flash memory address bus
F18	469	EXA2	Flash memory address bus
F17	470	EXDIO_2	Flash memory data bus
F16	471	VDD15	1.5V power supply
F15	472	EXDIO_10	Flash memory data bus
F14	473	TRNSEND_I	NC pin
F13	474	VDD15	1.5V power supply
F12	475	RBI_1	B phase signal input of R video (first bit)
F11	476	VDD15	1.5V power supply
F10	477	GBI_3	B phase signal input of G video (third bit)
F9	478	BBI_7	B phase signal input of B video (seventh bit)
F8	479	BBI_1	B phase signal input of B video (first bit)
F7	480	VDD15	1.5V power supply

■ AN5870SB (RGB ASSY : IC6402)
(AV I/O ASSY : IC7610, IC7613)
(VIDEO SLOT1 ASSY : IC7902)
(VIDEO SLOT2 ASSY : IC7902)

• Wide Band Analog SW

● Pin Arrangement / Block Diagram



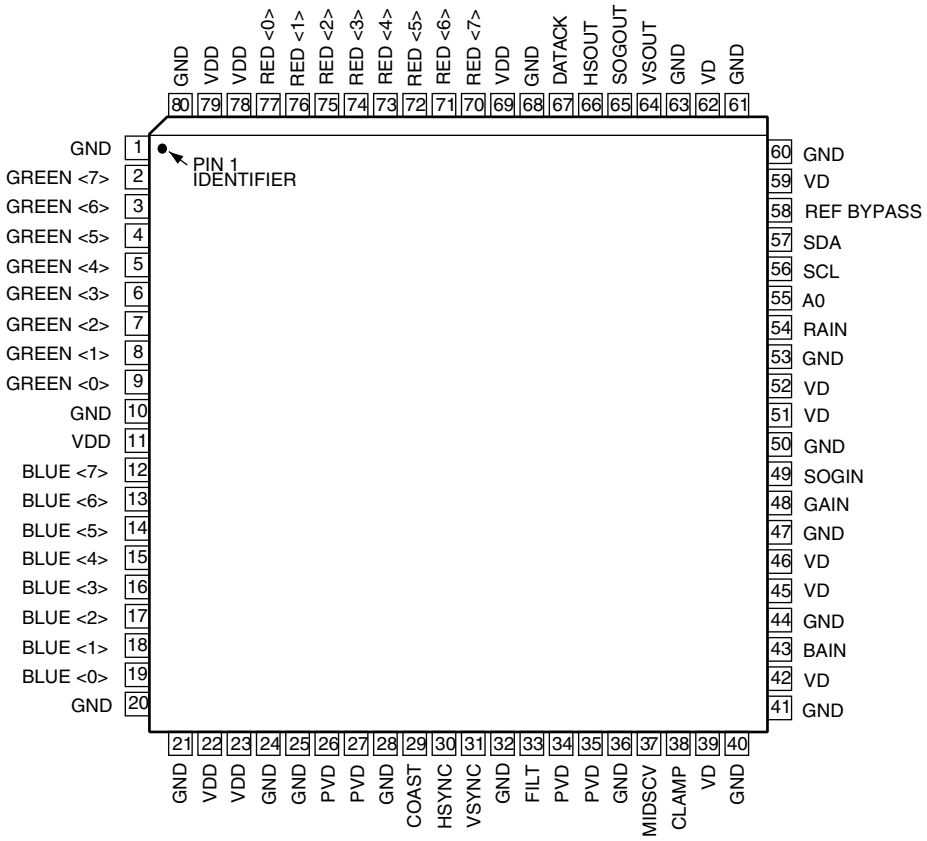
● Pin Function

No.	Name	Function	No.	Name	Function
1	RIN1	R input 1	19	GND	Ground (HV, HSEP, SW)
2	GND	Ground (R)	20	VOUT	V output
3	RIN2	R input 2	21	GND	Ground
4	Vcc1	5V (GSYNC)	22	HOUT	H output
5	GIN1	G input 1	23	GND	Ground
6	GND	Ground (G)	24	HDET	H detect
7	GIN2	G input 2	25	SYNCIN	Sync input
8	Vcc1	5V (R)	26	SW	SW
9	Vcc1	5V (G)	27	GND	Ground
10	Vcc1	5V (B)	28	BOUT	B output
11	BIN1	B input 1	29	GND	Ground (RGB)
12	GND	Ground (B)	30	GSYNC	GSync output
13	BIN2	B input 2	31	GND	Ground (RGB)
14	Vcc1	5V (HV, HSEP, SW)	32	GOUT	G output
15	HIN1	H input 1	33	Vcc2	12V (RGB)
16	HIN2	H input 2	34	ROUT	R output
17	VIN1	V input 1	35	GND	Ground
18	VIN2	V input 2	36	Vcc2	12V (RGB)

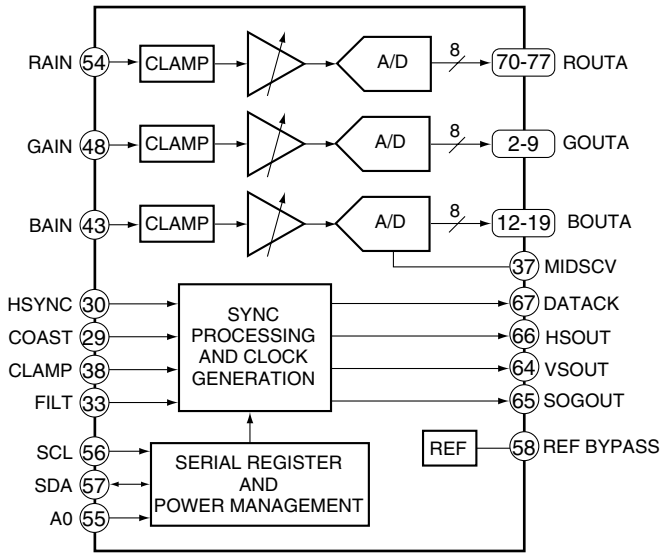
AD9883AKST-110 (RGB ASSY : IC6602)

• 110 MSPS Analog Interface

● Pin Arrangement (Top View)



● Block Diagram



● Pin Function

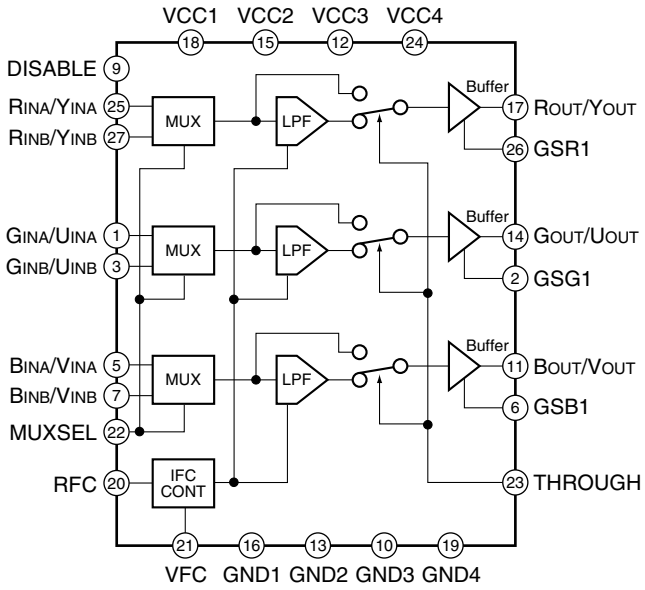
No.	Pin Name	I/O	Pin Function
1	GND	–	Ground
2	GREEN 7	O	Converter Green output (MSB)
3	GREEN 6	O	Converter Green output
4	GREEN 5	O	Converter Green output
5	GREEN 4	O	Converter Green output
6	GREEN 3	O	Converter Green output
7	GREEN 2	O	Converter Green output
8	GREEN 1	O	Converter Green output
9	GREEN 0	O	Converter Green output
10	GND	–	Ground
11	VDD	–	Power supply (3.3V)
12	BLUE 7	O	Converter Blue output (MSB)
13	BLUE 6	O	Converter Blue output
14	BLUE 5	O	Converter Blue output
15	BLUE 4	O	Converter Blue output
16	BLUE 3	O	Converter Blue output
17	BLUE 2	O	Converter Blue output
18	BLUE 1	O	Converter Blue output
19	BLUE 0	O	Converter Blue output
20	GND	–	Ground
21	GND	–	Ground
22	VDD	–	Power supply (3.3V)
23	VDD	–	Power supply (3.3V)
24	GND	–	Ground
25	GND	–	Ground
26	PVD	–	PLL power supply (3.3V)
27	PVD	–	PLL power supply (3.3V)
28	GND	–	Ground
29	COAST	I	PLL COAST signal input
30	HSYNC	I	Horizontal sync. input
31	VSYNC	I	Vertical sync. input
32	GND	–	Ground
33	FILT	–	External filter connection pin for built-in PLL
34	PVD	–	PLL power supply (3.3V)
35	PVD	–	PLL power supply (3.3V)
36	GND	–	Ground
37	MIDSCV	–	Internal middle scale voltage bias
38	CLAMP	I	Clamp input (External clamp signal)
39	VD	–	Analog power supply (3.3V)
40	GND	–	Ground
41	GND	–	Ground
42	VD	–	Analog power supply (3.3V)
43	BAIN	I	Analog input for converter B
44	GND	–	Ground
45	VD	–	Analog power supply (3.3V)

No.	Pin Name	I/O	Pin Function
46	VD	–	Analog power supply (3.3V)
47	GND	–	Ground
48	GAIN	I	Analog input for converter G
49	SOGIN	I	Input for Sync-on Green
50	GND	–	Ground
51	VD	–	Analog power supply (3.3V)
52	VD	–	Analog power supply (3.3V)
53	GND	–	Ground
54	RAIN	I	Analog input for converter R
55	A0	I	Address input 1 of serial port
56	SCL	I	Data clock (max. 100kHz) of serial port
57	SDA	I/O	Data input/output of serial port
58	REF BYPASS	–	Internal reference bypass
59	VD	–	Analog power supply (3.3V)
60	GND	–	Ground
61	GND	–	Ground
62	VD	–	Analog power supply (3.3V)
63	GND	–	Ground
64	VSOUT	O	VSYNC output (phasing with DATACLK)
65	SOGOUT	O	Sync-on-Green slicer output
66	HSOUT	O	HSYNC output (phasing with DATACLK)
67	DATACLK	O	Data input/output clock
68	GND	–	Ground
69	VDD	–	Power supply (3.3V)
70	RED 7	O	Converter Red output (MSB)
71	RED 6	O	Converter Red output
72	RED 5	O	Converter Red output
73	RED 4	O	Converter Red output
74	RED 3	O	Converter Red output
75	RED 2	O	Converter Red output
76	RED 1	O	Converter Red output
77	RED 0	O	Converter Red output
78	VDD	–	Power supply (3.3V)
79	VDD	–	Power supply (3.3V)
80	GND	–	Ground

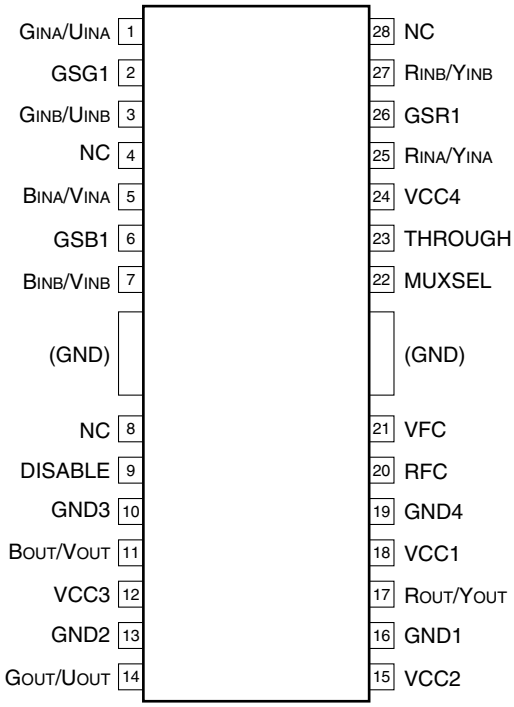
SM5301BS (RGB ASSY : IC6601)

• Video Filter

● Block Diagram



● Pin Arrangement (Top View)



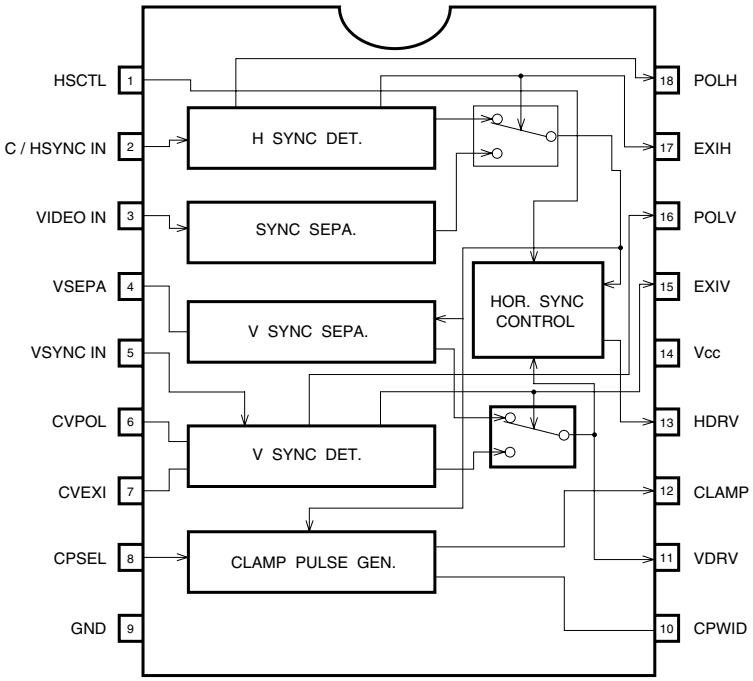
● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	GINA/UINA	I	Analog GINA or UINA signal input. Sync signal is input on SYNCIN pin.
2	GSG1	I	GOUT/UOUT output buffer gain set input
3	GINB/UINB	I	Analog GINB or UINB signal input. Sync signal is input on SYNCIN pin.
4	(NC)	–	No connection
5	BINA/VINA	I	Analog BINA or VINA signal input. Sync signal is input on SYNCIN pin.
6	GSB1	I	BOUT/VOUT output buffer gain set input
7	BINB/VINB	I	Analog BINB or VINB signal input. Sync signal is input on SYNCIN pin.
8	(NC)	–	No connection
9	DISABLE	I	Power save function. Built-in pull-down resistor. L : Enable H : Disable (Output pins: ROUT/YOUT, GOUT/UOUT, and BOUT/VOUT are high impedance.)
10	GND3	–	Analog ground
11	BOUT/VOUT	O	B/V signal output
12	VCC3	–	Analog 5V supply
13	GND2	–	Analog ground
14	GOUT/UOUT	O	G/U signal output
15	VCC2	–	Analog 5V supply
16	GND1	–	Analog ground
17	ROUT/YOUT	O	R/Y signal output
18	VCC1	–	Analog 5V supply
19	GND4	–	Analog ground
20	RFC	–	LPF (lowpass filter) cutoff frequency setting resistor connection
21	VFC	I	LPF (lowpass filter) cutoff frequency setting voltage input
22	MUXSEL	I	Input select signal. Built-in pull-down resistor. L : XINA pin select H : XINB pin select
23	THROUGH	I	Filter through Built-in pull-down resistor. L : Filter function H : Filter through (buffer only)
24	VCC4	–	Analog 5V supply
25	RINA/YINA	I	Analog RINA or YINA signal input. Sync signal is input on SYNCIN pin.
26	GSR1	I	ROUT/YOUT output buffer gain set input
27	RINB/YINB	I	Analog RINB or YINB signal input. Sync signal is input on SYNCIN pin.
28	(NC)	–	No connection

BA7078AF (RGB ASSY : IC6604)

• Synchonous seperation IC

● Block Diagram



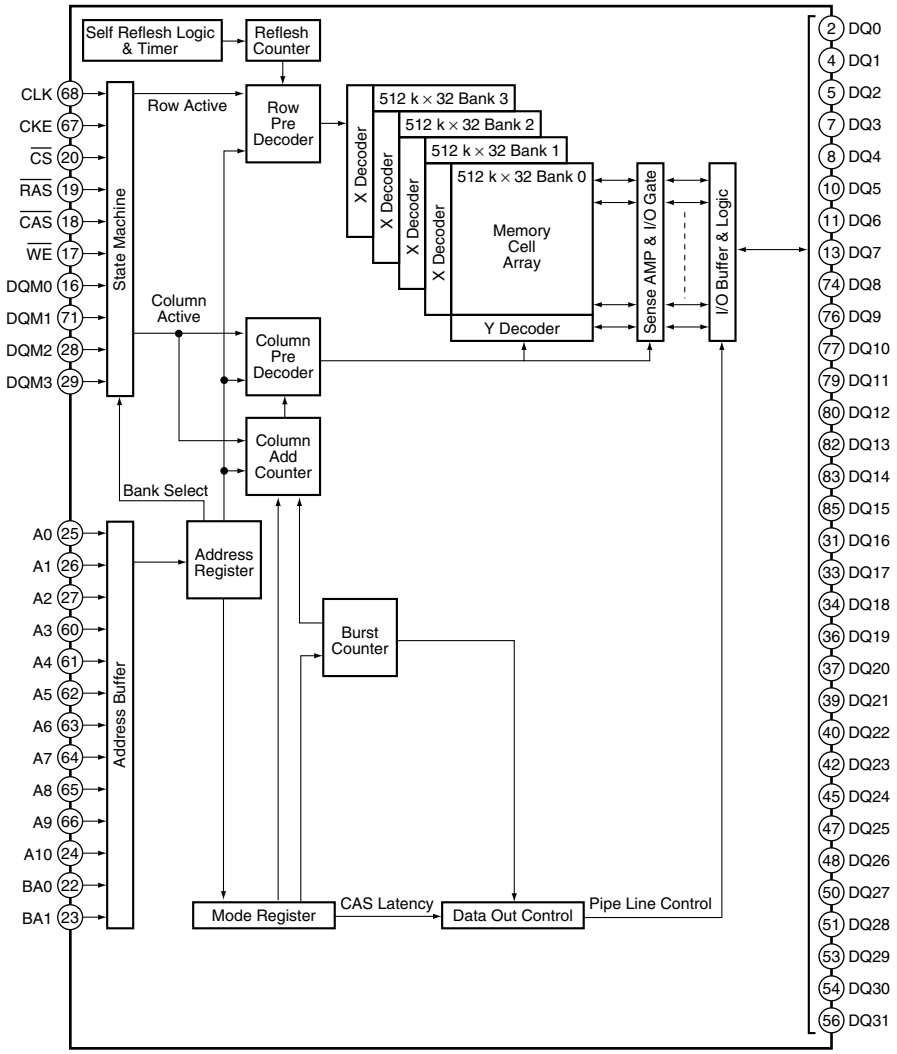
● Pin Function

No.	Pin Name	Pin Function
1	HSCTL	HDRV output Used to select whether to output the VDRV section of the HDRV output signal. High : VDRV section of HDRV is output Low : VDRV section of HDRV is not output
2	C/HSYNC IN	Composite sync / H SYNC input Input either the composite synchronization signal or the horizontal synchronization signal. Input is clamped, and is initiated by capacitor coupling.
3	VIDEO IN	SYNC ON VIDEO input Inputs the SYNC ON VIDEO signal(green). Input is sink chip clamped. Input is initiated by capacitor coupling.
4	VSEPA	f-V conversion Converts the horizontal synchronization signal frequency into a voltage. The voltage generated is proportional to the frequency of the horizontal synchronization signal. Attach a 0.56 μF capacitor between the ground pins.
5	VSYNC IN	V SYNC input Inputs the vertical synchronization signal.
6	CVPOL	Vertical polarity integration Integrates the vertical synchronization signal polarity detection circuit. Attach a 1.5 μF capacitor between this pin and the ground.
7	CVEXI	Vertical existence integration Integrates the vertical synchronization signal existence detection circuit. Attach a 1 μF capacitor between this pin and the ground.
8	CPSEL	Setting the clamp position Used to set the clamp pulse generation position to either the front or back edge of HSYNC High : The front edge is the generation position Open : Composite / H SYNC IN : The front edge is the generation position VIDEO IN : The back edge is the generation position Low : The back edge is the generation position
9	GND	Ground
10	CPWID	Setting the clamp pulse width Sets the clamp pulse width according to the attached time constant. Attach a resistor between this pin and VCC and, a capacitor between this pin and GND. When R = 3.9kΩ and C = 100pF, pulse width is approximately 400 ns. Set the resistor to register an abnormality at 1kΩ.
11	VDRV	VDRV output Outputs the vertical synchronization signal. The output signal has positive polarity.
12	CLAMP	Clamp output Outputs the clamp pulse generated from the vertical synchronization signal. The output signal has a positive polarity.
13	HDRV	HDRV output Outputs the clamp pulse generated from the horizontal synchronization signal. The output signal has positive polarity.
14	Vcc	Power supply
15	EXIV	Vertical existence output Indecates whether the vertical synchronization signal exists.
16	POLV	Vertical polarity output Indicates the polarity of the vertical synchronization signal.
17	EXIH	Horizontal existence output Indicates whether the horizontal synchronization signal exists.
18	POLH	Horizontal polarity output Indicates the polarity of the horizontal synchronization signal.

HY57V643220CT-7 (RGB ASSY : IC7001, IC7002)

• Synchronous DRAM

● Block Diagram



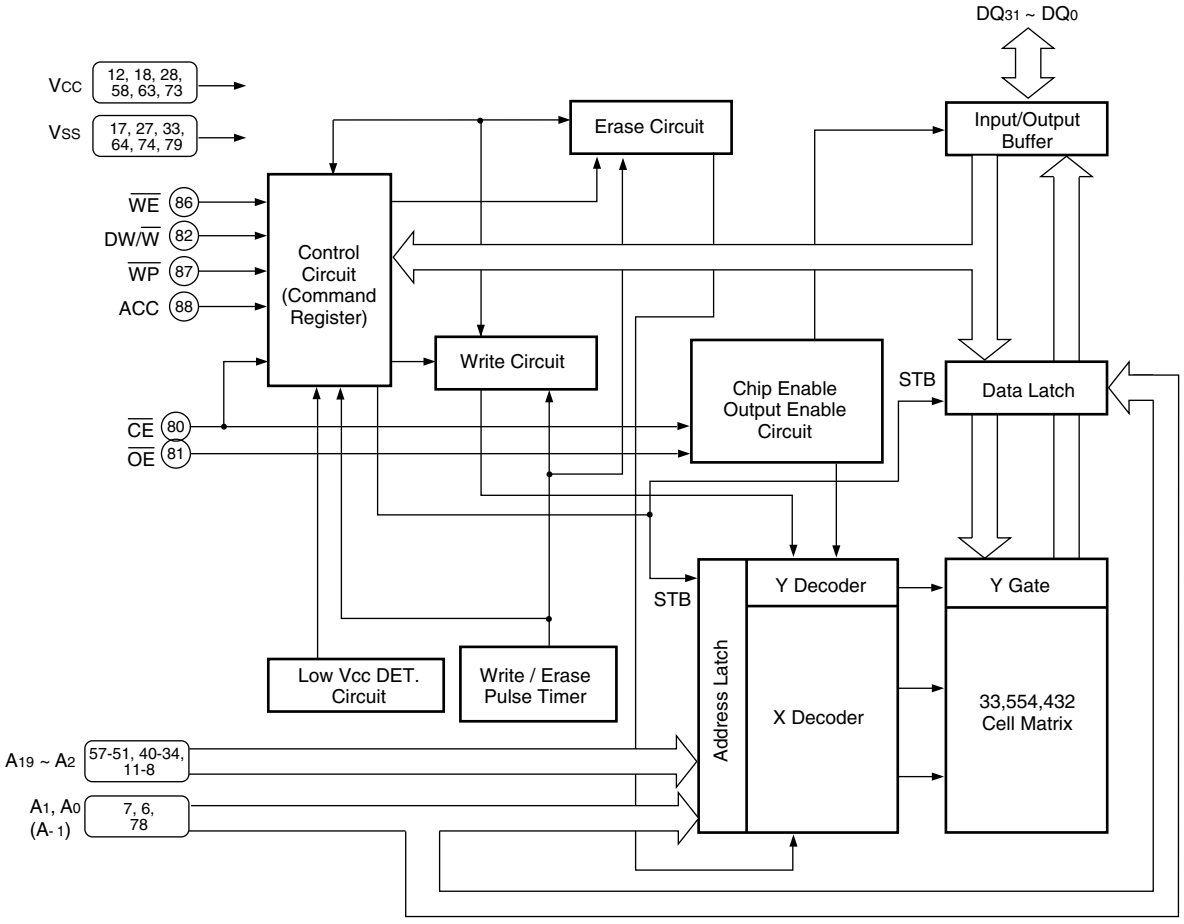
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply	44	VSS	–	Ground
2	DQ0	I/O	Data input/output	45	DQ24	I/O	Data input/output
3	VDDQ	–	Power supply for output buffer	46	VSSQ	–	Ground for output buffer
4	DQ1	I/O	Data input/output	47	DQ25	I/O	Data input/output
5	DQ2	I/O	Data input/output	48	DQ26	I/O	Data input/output
6	VSSQ	–	Ground for output buffer	49	VDDQ	–	Power supply for output buffer
7	DQ3	I/O	Data input/output	50	DQ27	I/O	Data input/output
8	DQ4	I/O	Data input/output	51	DQ28	I/O	Data input/output
9	VDDQ	–	Power supply for output buffer	52	VSSQ	–	Ground for output buffer
10	DQ5	I/O	Data input/output	53	DQ29	I/O	Data input/output
11	DQ6	I/O	Data input/output	54	DQ30	I/O	Data input/output
12	VSSQ	–	Ground for output buffer	55	VDDQ	–	Power supply for output buffer
13	DQ7	I/O	Data input/output	56	DQ31	I/O	Data input/output
14	NC	–	No connection	57	NC	–	No connection
15	VDD	–	Power supply	58	VSS	–	Ground
16	DQM0	I	Data input/output mask	59	DQM3	I	Data input/output mask
17	/WE	I	Write enable	60	A3	I	Address input
18	/CAS	I	Column address strobe	61	A4	I	Address input
19	/RAS	I	Row address strobe	62	A5	I	Address input
20	/CS	I	Chip select input	63	A6	I	Address input
21	NC	–	No connection	64	A7	I	Address input
22	BA0	I	Bank address input	65	A8	I	Address input
23	BA1	I	Bank address input	66	A9	I	Address input
24	A10/AP	I	Address input	67	CKE	I	Clock enable
25	A0	I	Address input	68	CLK	I	System clock input
26	A1	I	Address input	69	NC	–	No connection
27	A2	I	Address input	70	NC	–	No connection
28	DQM2	I	Data input/output mask	71	DQM1	I	Data input/output mask
29	VDD	–	Power supply	72	VSS	–	Ground
30	NC	–	No connection	73	NC	–	No connection
31	DQ16	I/O	Data input/output	74	DQ8	I/O	Data input/output
32	VSSQ	–	Ground for output buffer	75	VDDQ	–	Power supply for output buffer
33	DQ17	I/O	Data input/output	76	DQ9	I/O	Data input/output
34	DQ18	I/O	Data input/output	77	DQ10	I/O	Data input/output
35	VDDQ	–	Power supply for output buffer	78	VSSQ	–	Ground for output buffer
36	DQ19	I/O	Data input/output	79	DQ11	I/O	Data input/output
37	DQ20	I/O	Data input/output	80	DQ12	I/O	Data input/output
38	VSSQ	–	Ground for output buffer	81	VDDQ	–	Power supply for output buffer
39	DQ21	I/O	Data input/output	82	DQ13	I/O	Data input/output
40	DQ22	I/O	Data input/output	83	DQ14	I/O	Data input/output
41	VDDQ	–	Power supply for output buffer	84	VSSQ	–	Ground for output buffer
42	DQ23	I/O	Data input/output	85	DQ15	I/O	Data input/output
43	VDD	–	Power supply	86	VSS	–	Ground

■ MBM29PL3200BE70PFV (RGB ASSY : IC7152)

• Page Mode Flash Memory

● Block Diagram



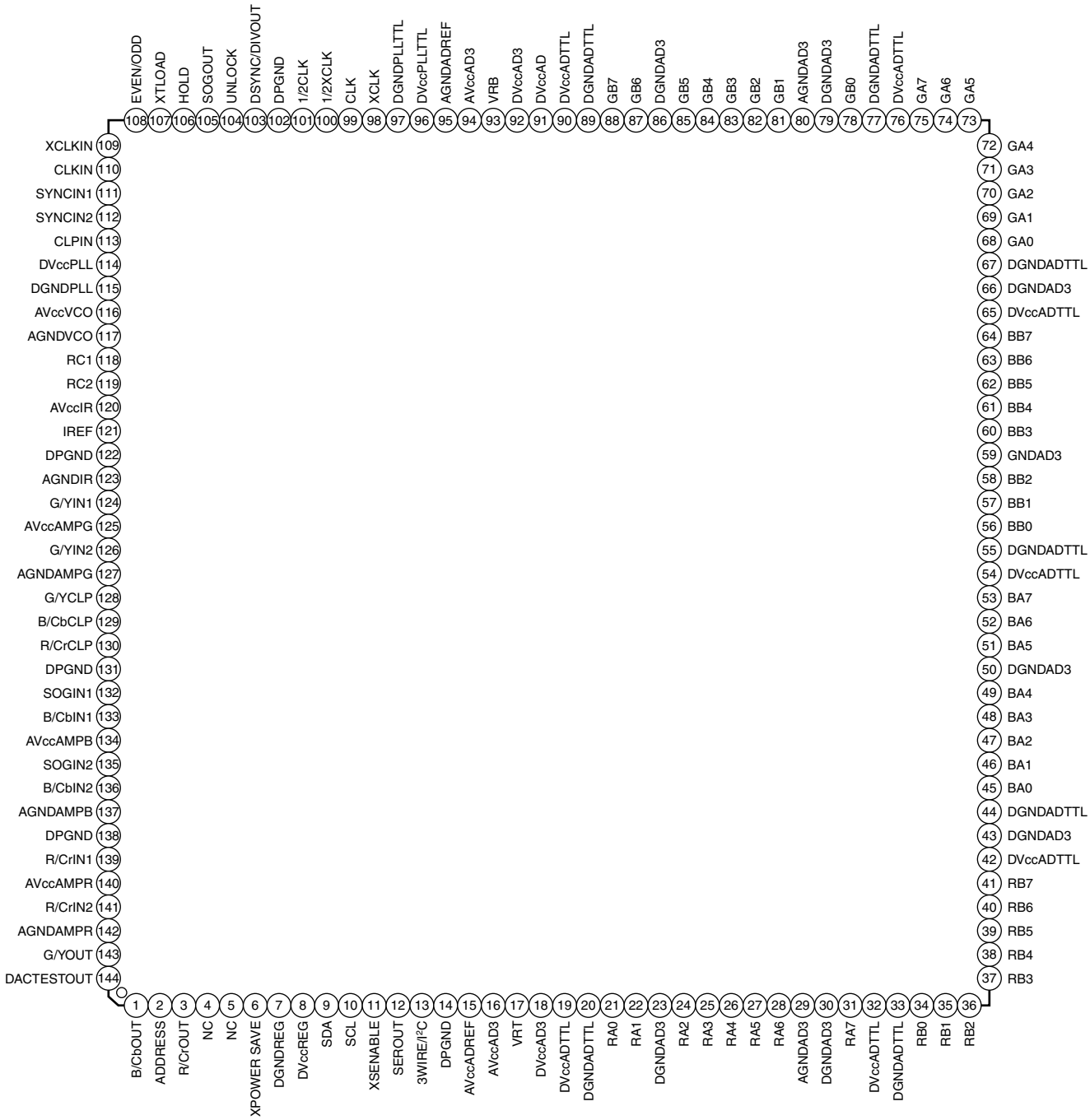
● Pin Function

No.	Pin Name	I/O	Pin Function
57-51, 40-34, 11-6, 78	A_{19} - A_0, A_{-1}	I	Address input
78-75, 72-65, 62-59, 32-19, 26-19, 16-13	DQ_{31} - DQ_0	I/O	Data input/output
80	CE	I	Chip enable
81	OE	I	Output enable
86	WE	I	Write enable
82	DW/W	I	16 bit, 32 bit mode switch
87	WP	I	Write protect
88	ACC	I	Acceleration
17, 27, 33, 64, 74, 79	V_{SS}	–	Ground
12, 18, 28, 58, 63, 73	V_{CC}	–	Power supply
1-5, 41-50, 83-85, 89, 90	N.C.	–	No connection

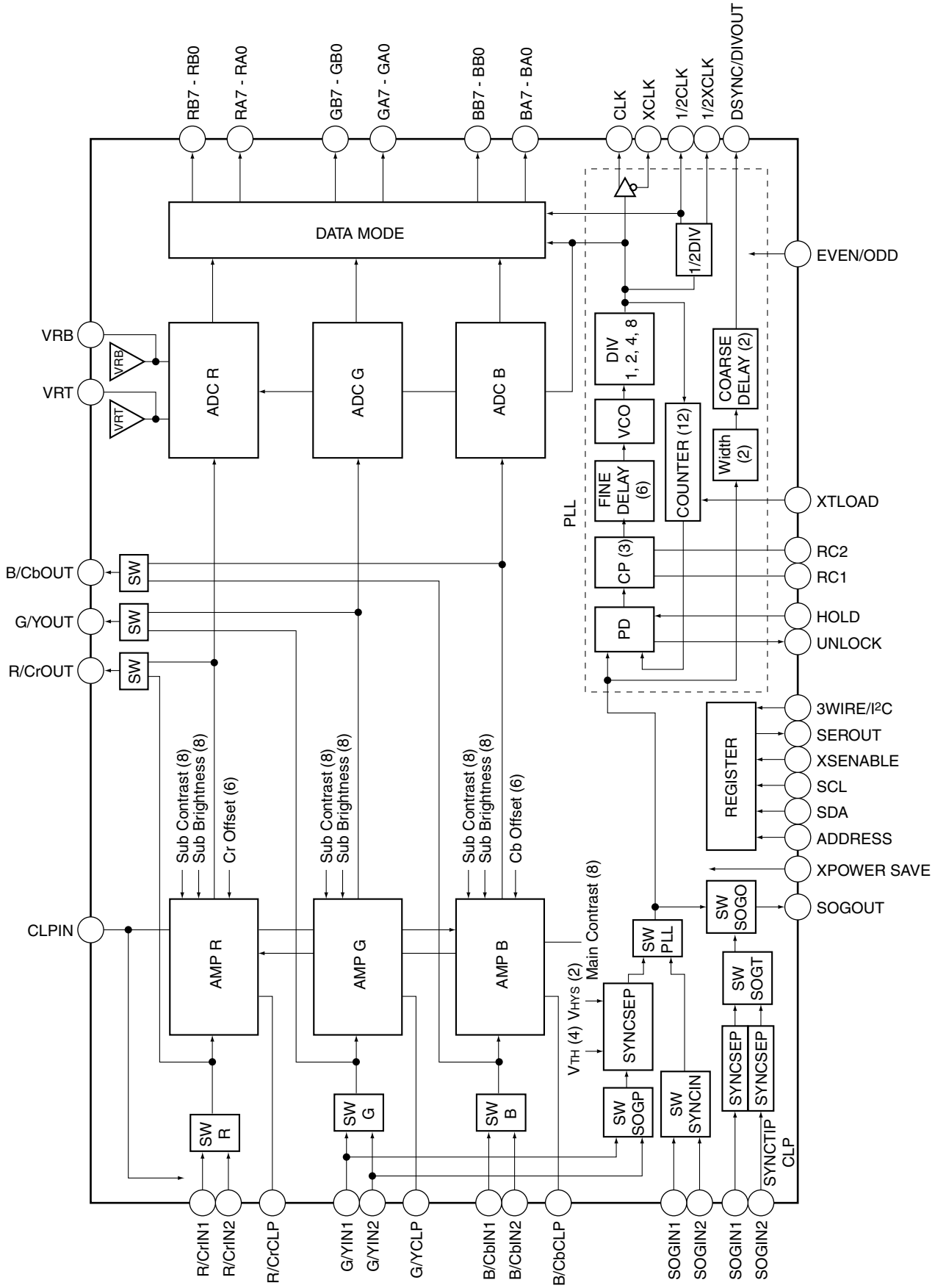
CXA3516R (RGB ASSY : IC6001)

• AD + PLL IC

● Pin Arrangement (Top View)



● Block Diagram



● Pin Function

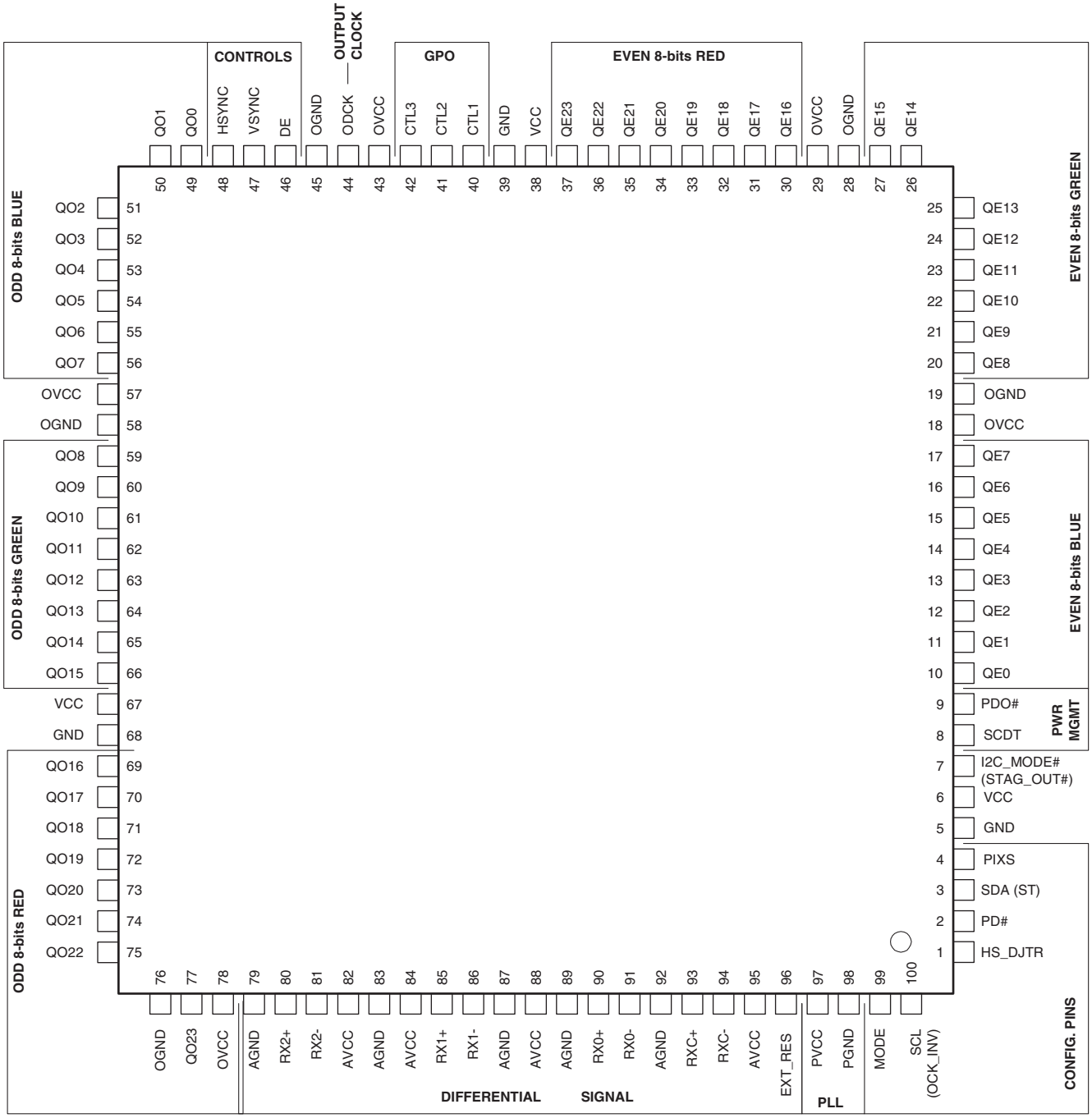
No.	Symbol	I/O	Pin Function
1	B/CbOUT	O	Amplifier output signal monitor
2	ADDRESS	I	I²C slave address setting
3	R/CrOUT	O	Amplifier output signal monitor
4	NC	–	Not used
5	NC	–	Not used
6	XPOWER SAVE	I	Power save setting
7	DGNDREG	–	Register GND
8	DVccREG	–	Register power supply
9	SDA	I	Control register data input
10	SCL	I	Control register CLK input
11	XSENABLE	I	Enable signal input for 3-wire control register
12	SEROUT	O	3-wire control register data readout
13	3WIRE/I²C	I	Selection of input between I²C bus and 3-wire bus
15	AVccADREF	–	Reference power supply for A/D converter
16, 94	AVccAD3	–	Analog power supply for A/D converter
17	VRT	O	Top reference voltage output for A/D converter
18, 92	DVccAD3	–	Digital power supply for A/D converter
19, 32, 42, 54, 65, 76, 90	DVccADTTL	–	TTL output power supply for A/D converter
20, 33, 44, 55, 67, 77, 89	DGNDADTTL	–	TTL output GND for A/D converter
21, 22, 24-28, 31	RA0 - RA7	O	Data output for R-channel port A side
23, 30, 43, 50, 59, 66, 79, 86	DGNDAD3	–	Digital GND for A/D converter
29, 80	AGNDAD3	–	Analog GND for A/D converter
34-41	RB0 - RB7	O	Data output for R-channel port B side
45-49, 51-53	BA0 - BA7	O	Data output for B-channel port A side
56-58, 60-64	BB0 - BB7	O	Data output for B-channel port B side
68-75	GA0 - GA7	O	Data output for G-channel port A side
78, 81-85, 87, 88	GB0 - GB7	O	Data output for G-channel port B side
91	DVccAD	–	Digital power supply for A/D converter
93	VRB	O	Bottom reference voltage output for A/D converter
95	AGNDADREF	–	Reference voltage GND for A/D converter
96	DVccPLLTTL	–	TTL output power supply for PLL
97	DGNDPLLTTL	–	TTL output GND for PLL
98	XCLK	O	Inverted CLK output
99	CLK	O	CLK output
100	1/2XCLK	O	Inverted 1/2CLK output
101	1/2CLK	O	1/2CLK output
103	DSYNC/DIVOUT	O	DSYNC or DIVOUT signal output
104	UNLOCK	O	Unlock signal output
105	SOGOUT	O	Output for SYNC ON GREEN
106	HOLD	I	Input for phase comparison disable signal

No.	Symbol	I/O	Pin Function
107	XTLOAD	I	Programmable counter reset setting
108	EVEN/ODD	I	Inverted pulse input of ADC sampling CLK
109	XCLKIN	I	Inverted CLK input for testing
110	CLKIN	I	CLK input for testing
111	SYNCIN1	I	Sync input 1
112	SYNCIN2	I	Sync input 2
113	CLPIN	I	Clamp pulse input
114	DVccPLL	–	Digital power supply for PLL
115	DGNDPLL	–	Digital GND for PLL
116	AVccVCO	–	Analog power supply for PLL VCO
117	AGNDVCO	–	Analog GND for PLL VCO
118	RC1	–	External pin for PLL loop filter
119	RC2	–	External pin for PLL loop filter
120	AVccIR	–	Analog power supply for IREF
121	IREF	I	Current setup
123	AGNDIR	–	Analog GND for TREF
124	G/YIN1	I	G/Y signal input 1
125	AVccAMPG	–	Power supply for G/Y amplifier block
126	G/YIN2	I	G/Y signal input 2
127	AGNDAMPG	–	GND for G/Y amplifier block
128	G/YCLP	–	Clamp capcitor for brightness
129	B/CbCLP	–	Clamp capcitor for brightness
130	R/CrCLP	–	Clamp capcitor for brightness
132	SOGIN1	I	SYNC ON GREEN signal input 1
133	B/CbIN1	I	B/Cb signal input 1
134	AVccAMPB	–	Power supply for B/Cb amplifier block
135	SOGIN2	I	SYNC ON GREEN signal input 2
136	B/CbIN2	I	B/Cb signal input 2
137	AGNDAMPB	–	GND for B/Cb amplifier block
139	R/CrIN1	I	R/Cr signal input 1
140	AVccAMPR	–	Power supply for R/Cr amplifier block
141	R/CrIN2	I	R/Cr signal input 2
142	AGNDAMPR	–	GND for R/Cr amplifier block
143	G/YOUT	O	Monitor pin for amplifier output signal
144	DAC TEST OUT	O	DAC testing output for amplifier block control register
14, 102, 122, 131, 138	DPGND	–	GND

■ SII116BCTG100 (AV I/O ASSY : IC????)

• Panel Link Receiver IC

● Pin Arrangement (Top View)



● Pin Function

Output Pins

Pin Name	No.	Type	Function
QE23 - QE0	37-30, 27-20, 17-10	Out	Output Even Data[23:0] corresponds to 24-bit pixel data for one pixel per clock input mode and to the first 24-bit pixel data for two pixels per clock mode. Output data is synchronized with output data clock (ODCK). Refer to the TFT Panel Data Mapping section, which tabulates the relationship between the input data to the transmitter and output data from the receiver. A low level on PD# or PDO# will put the output drivers into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.
QO23 - QO0	77, 75-69, 66-59, 56-49	Out	Output Odd Data[23:0] corresponds to the second 24-bit pixel data for two pixels per clock mode. During one pixel per clock mode, these outputs are driven low. Output data is synchronized with output data clock (ODCK). Refer to the TFT Panel Data Mapping section, which tabulates the relationship between the input data to the transmitter and output data from the receiver. A low level on PD# or PDO# will put the output drivers into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.
ODCK	44	Out	Output Data Clock. This output can be inverted using the OCK_INV pin. A low level on PD# or PDO# will put the output driver into a high impedance (tri-state) mode. A weak internal pulldown device brings the output to ground.
DE	46	Out	Output Data Enable. This signal qualifies the active data area. A HIGH level signifies active display time and a LOW level signifies blanking time. This output signal is synchronized with the output data. A low level on PD# or PDO# will put the output driver into a high impedance (tri-state) mode. A weak internal pull-down device brings the output to ground.
HSYNC VSYNC CTL1 CTL2 CTL3	48 47 40 41 42	Out	Horizontal Sync output control signal. Vertical Sync output control signal. General output control signal 1. This output is not powered down by PDO#. General output control signal 2. General output control signal 3. A low level on PD# or PDO# will put the output drivers (except CTL1 by PDO#) into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground.

Differential Signal Data Pins

Pin Name	No.	Type	Function
RX0+ RX0- RX1+ RX1- RX2+ RX2-	90 91 85 86 80 81	Analog	Receiver Differential Data Pins. TMDS Low Voltage Differential Signal input data pairs.
RXC+ RXC-	93 94	Analog	Receiver Differential Clock Pins. TMDS Low Voltage Differential Signal input clock pair.
EXT_RES	96	Analog	Impedance Matching Control. An external 390Ω resistor must be connected between AVCC and this pin.

Configuration Pins

Pin Name	No.	Type	Function
MODE	99	In	Mode Select Pin. Used to select between drop-in strap-selected operation, or register programmable operation. To activate register-programmable operation, tie both pin 99 and pin 7 LOW. HIGH=161B (Compatible) Mode – strap selections are used to set part operation. Internal registers controlling non strap-selectable functions are reset to their default values. LOW=1161 (Programmable) Mode – I2C registers are used to program part operation.
OCK_INV	100	In	ODCK Polarity. A LOW level selects normal ODCK output. A HIGH level selects inverted ODCK output. All other output signals are unaffected by this pin. They will maintain the same timing no matter the setting of OCK_INV pin
SCL			I2C Port Clock. When pins 99 and 7 are tied LOW, pin 100 functions as an I2C port input clock. The slave I2C function does not ever try to extend cycles by pulling this pin low, so the pin remains input-only at all times. This pin accepts 3.3V signaling only; it is not 5V-tolerant.
PIXS	4	In	Pixel Select. A LOW level indicates one pixel (up to 24-bits) per clock mode using QE[23:0]. A HIGH level indicates two pixels (up to 48-bits) per clock mode using QE[23:0] for first pixel and QO[23:0] for second pixel.
STAG_OUT#	7	In	Staggered Output. A HIGH level selects normal simultaneous outputs on all odd and even data lines. A LOW level selects staggered output drive. This function is only available in two pixels per clock mode.
I2C_MODE#			This pin must be tied LOW to put the receiver into I2C mode.
ST	3	In/Out	Output Drive. A HIGH level selects HIGH output drive strength. A LOW level selects LOW output drive strength.
SDA			I2C Port Data. When pins 99 and 7 are tied LOW, pin 3 functions as an I2C port data I/O signal. This pin accepts 3.3V signaling only; it is not 5V-tolerant.
HS_DJTR	1	In	HSYNC De-jitter. This pin enables/disables the HSYNC de-jitter function. To enable the HSYNC de-jitter function this pin should be HIGH. To disable the HSYNC de-jitter function this pin should be LOW.

Power Management Pins

Pin Name	No.	Type	Function
SCDT	8	Out	Sync Detect. A HIGH level is outputted when DE is actively toggling indicating that the link is alive. A LOW level is outputted when DE is inactive, indicating the link is down. Can be connected to PDO# to power down the outputs when DE is not detected. The SCDT output itself, however, remains in the active mode at all times.
PDO#	9	In	Output Driver Power Down (active LOW). A HIGH level indicates normal operation. A LOW level puts all the output drivers only (except SCDT and CTL1) into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground. PDO# is a sub-set of the PD# description. The chip is not in power-down mode with this pin. SCDT and CTL1 are not tri-stated by this pin.
PD#	2	In	Power Down (active LOW). A HIGH level indicates normal operation. A LOW level indicates power down mode. During power down mode, all the output drivers are put into a high impedance (tri-state) mode. A weak internal pull-down device brings each output to ground. Additionally, all analog logic is powered down, and all inputs are disabled. Driving PD# LOW disables all internal logic and outputs, including SCDT and clock detect functions; it also resets all internal programmable registers to their default states.

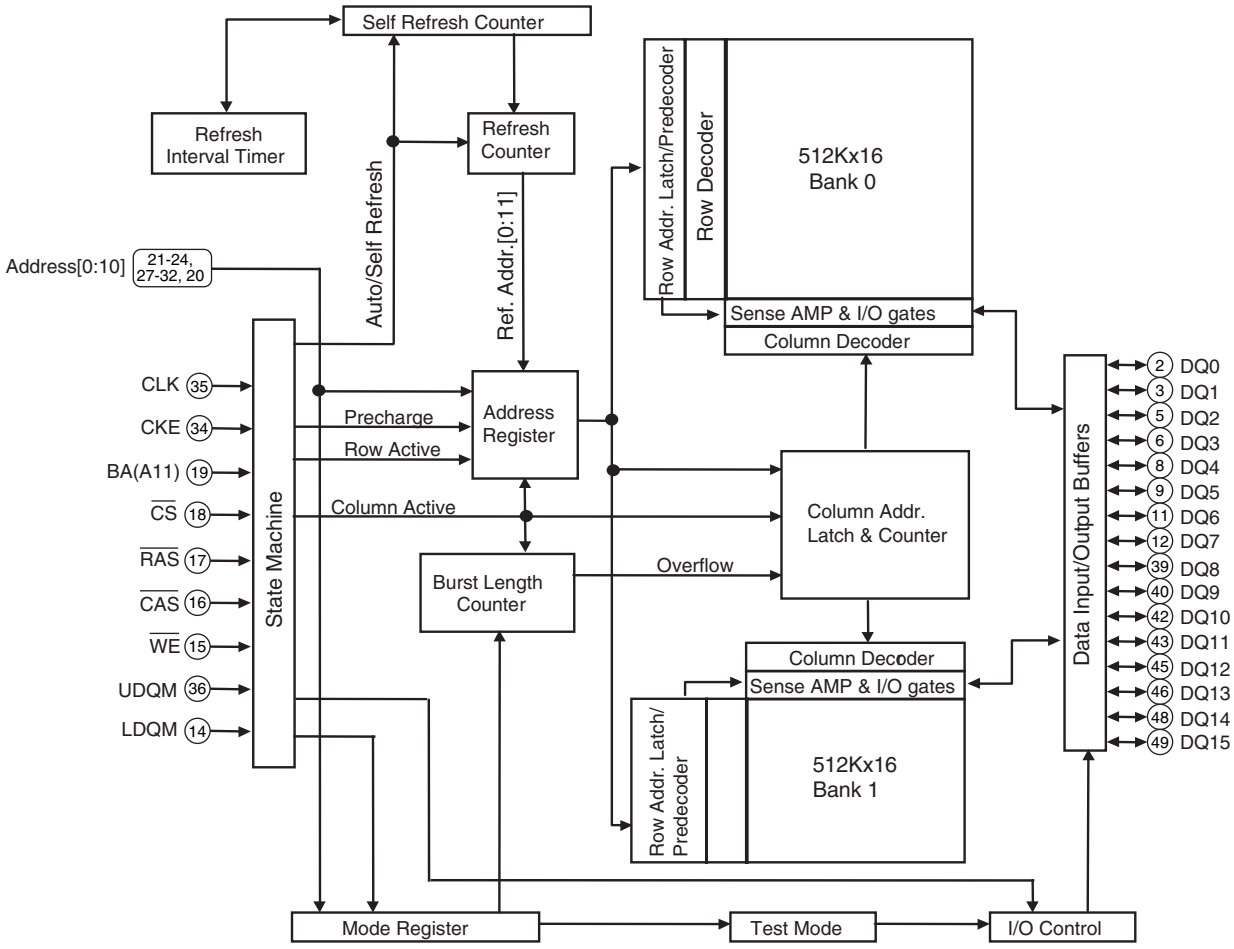
Power and Ground Pins

Pin Name	No.	Type	Function
VCC	6, 38, 67	Power	Digital Core VCC, must be set to 3.3V.
GND	5, 39, 68	Ground	Digital Core GND.
OVCC	18, 29, 43, 57, 78	Power	Output VCC, must be set to 3.3V.
OGND	19, 28, 45, 58, 76	Ground	Output GND.
AVCC	82, 84, 88, 95	Power	Analog VCC must be set to 3.3V.
AGND	79, 83, 87, 89, 92	Ground	Analog GND.
PVCC	97	Power	PLL Analog VCC must be set to 3.3V.
PGND	98	Ground	PLL Analog GND.

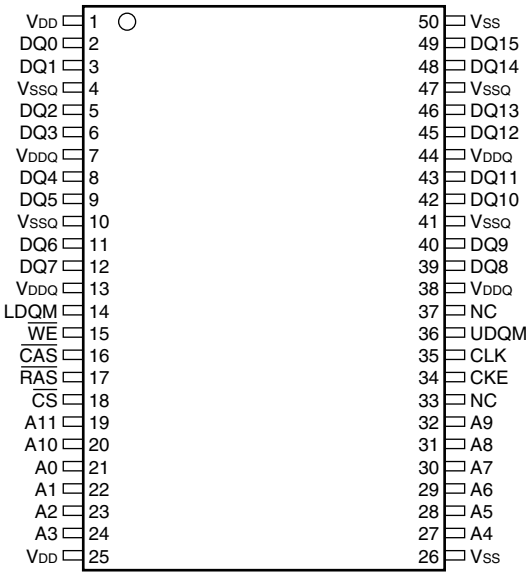
HY57V161610DTC-8 (VIDEO SLOT1 ASSY : IC6106)
(VIDEO SLOT2 ASSY : IC6106)

• 16M SDRAM

● Block Diagram



● Pin Arrangement



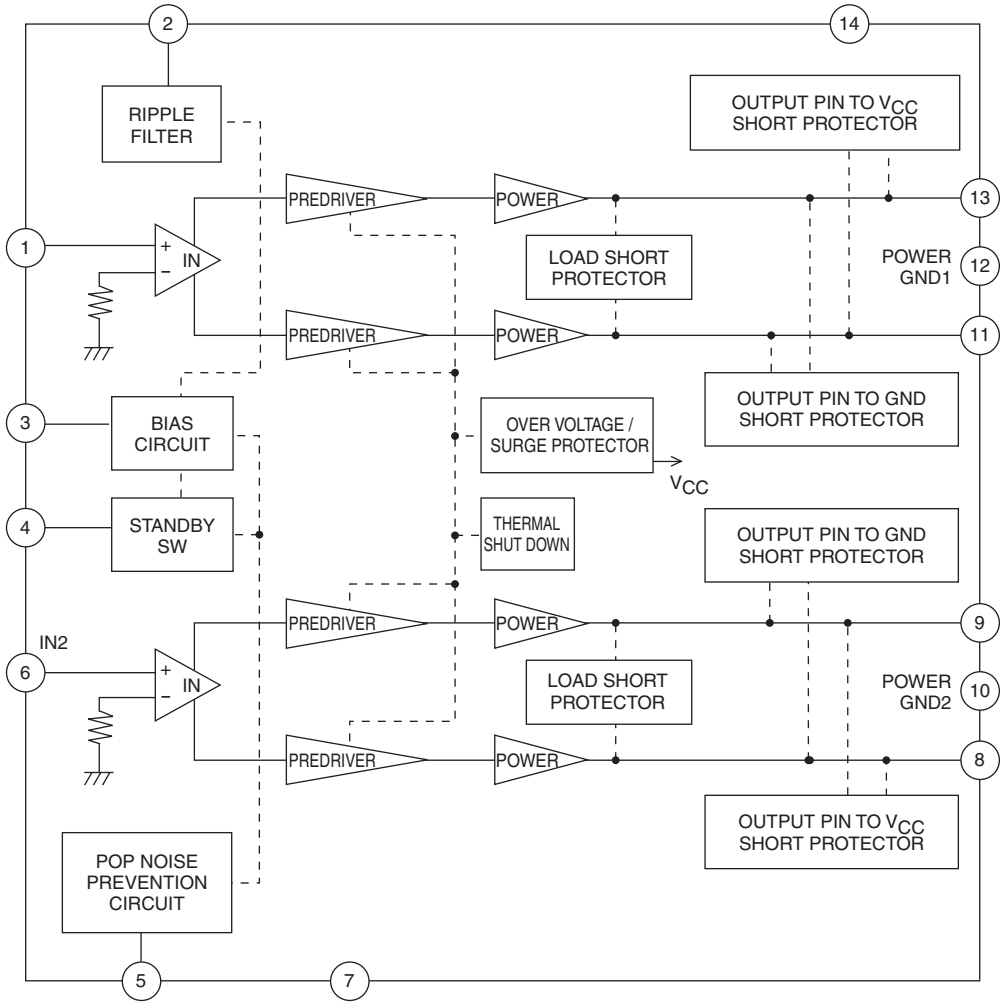
● Pin Function

No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply
2	DQ0	I/O	Data input/output
3	DQ1	I/O	Data input/output
4	VSSQ	–	Ground for DQ
5	DQ2	I/O	Data input/output
6	DQ3	I/O	Data input/output
7	VDDQ	–	Power supply for DQ
8	DQ4	I/O	Data input/output
9	DQ5	I/O	Data input/output
10	VSSQ	–	Ground for DQ
11	DQ6	I/O	Data input/output
12	DQ7	I/O	Data input/output
13	VDDQ	–	Power supply for DQ
14	LDQM	I	Data input/output mask
15	/WE	I	Write enable
16	/CAS	I	Column address strobe
17	/RAS	I	Row address strobe
18	/CS	I	Chip select input
19	A11	I	Address input
20	A10	I	Address input
21	A0	I	Address input
22	A1	I	Address input
23	A2	I	Address input
24	A3	I	Address input
25	VDD	–	Power supply
26	VSS	–	Ground
27	A4	I	Address input
28	A5	I	Address input
29	A6	I	Address input
30	A7	I	Address input
31	A8	I	Address input
32	A9	I	Address input
33	NC	–	No connection
34	CKE	I	Clock enable
35	CLK	I	System clock input
36	UDQM	I	Data input/output mask
37	NC	–	No connection
38	VDDQ	–	Power supply for DQ
39	DQ8	I/O	Data input/output
40	DQ9	I/O	Data input/output
41	VSSQ	–	Ground for DQ
42	DQ10	I/O	Data input/output
43	DQ11	I/O	Data input/output
44	VDDQ	–	Power supply for DQ
45	DQ12	I/O	Data input/output
46	DQ13	I/O	Data input/output
47	VSSQ	–	Ground for DQ
48	DQ14	I/O	Data input/output
49	DQ15	I/O	Data input/output
50	VSS	–	Ground

■ LA4625 (AUDIO AMP ASSY : IC5003)

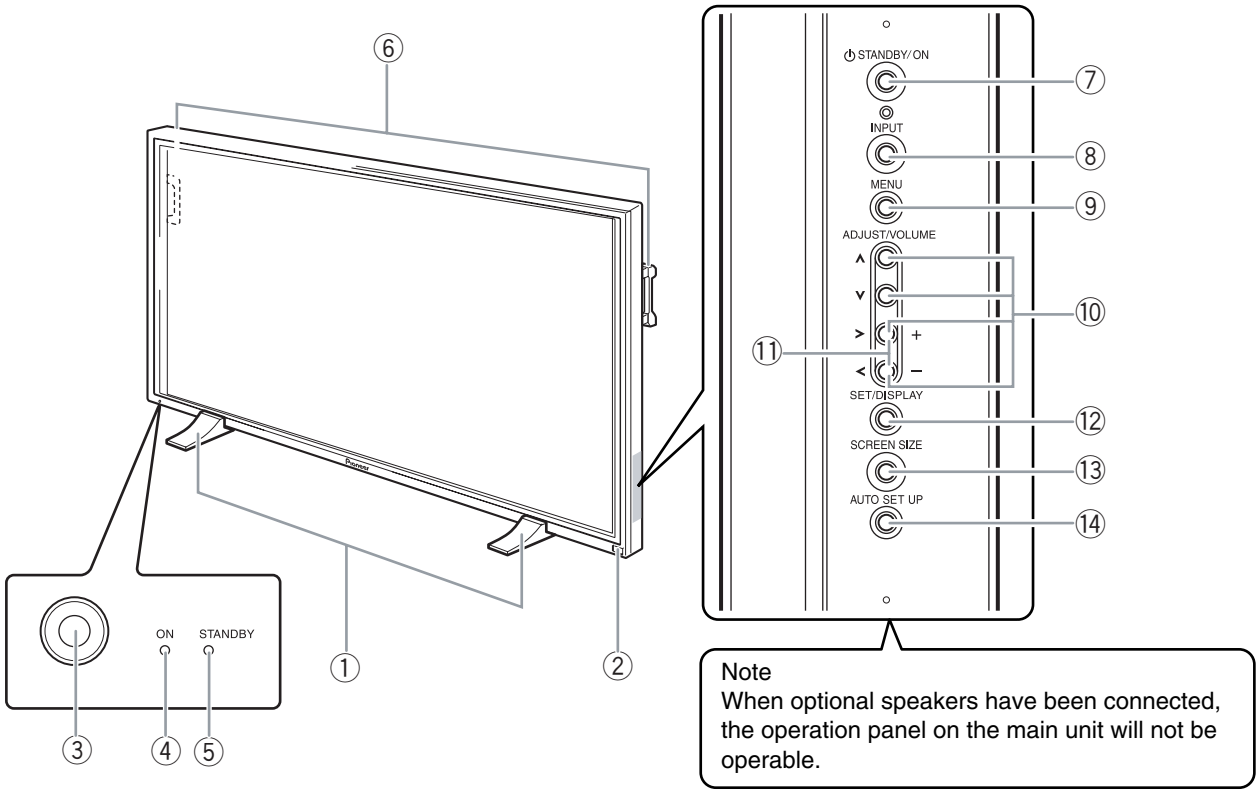
• 2ch BLT AF Power Amp. IC

● Block Diagram



8. PANEL FACILITIES

■ MAIN UNIT



Main unit

① **Display stand**

② **Remote control sensor**
Point the remote control toward the remote sensor to operate the unit .

③ **Ambient light sensor**
This sensor measures the level of light inside the viewing room; it is enabled when the [ENERGY SAVE] option is set to [AUTO] .

④ **ON indicator**
Lights green when the plasma display is operating.
When flashing, the indicator is used to indicate error messages.
The indicator flashes green once every two seconds when the [POWER MANAGEMENT] function is operating.

⑤ **STANDBY indicator**
Lights red when the unit is in standby mode.
When flashing, the indicator is used to indicate error messages.

⑥ **Handles**
The plasma displays PDP-50MXE1/PDP-50MXE1-S and PDP-43MXE1/PDP-43MXE1-S utilize differing methods of handle attachment, but the handles themselves are used in the same way.
Operation panel on the main unit

⑦ **STANDBY/ON button**
Press to put the display in operation or standby mode.

Operation panel on the main unit

⑧ **INPUT button**
Press to select the input.

⑨ **MENU button**
Press to open and close the on-screen menu.

⑩ **ADJUST (▲ / ▼ / ► / ◄) buttons**
Use these buttons to move the onscreen cursor between selection options, and to perform adjustments.
Instructions for use are given with each command option onscreen.

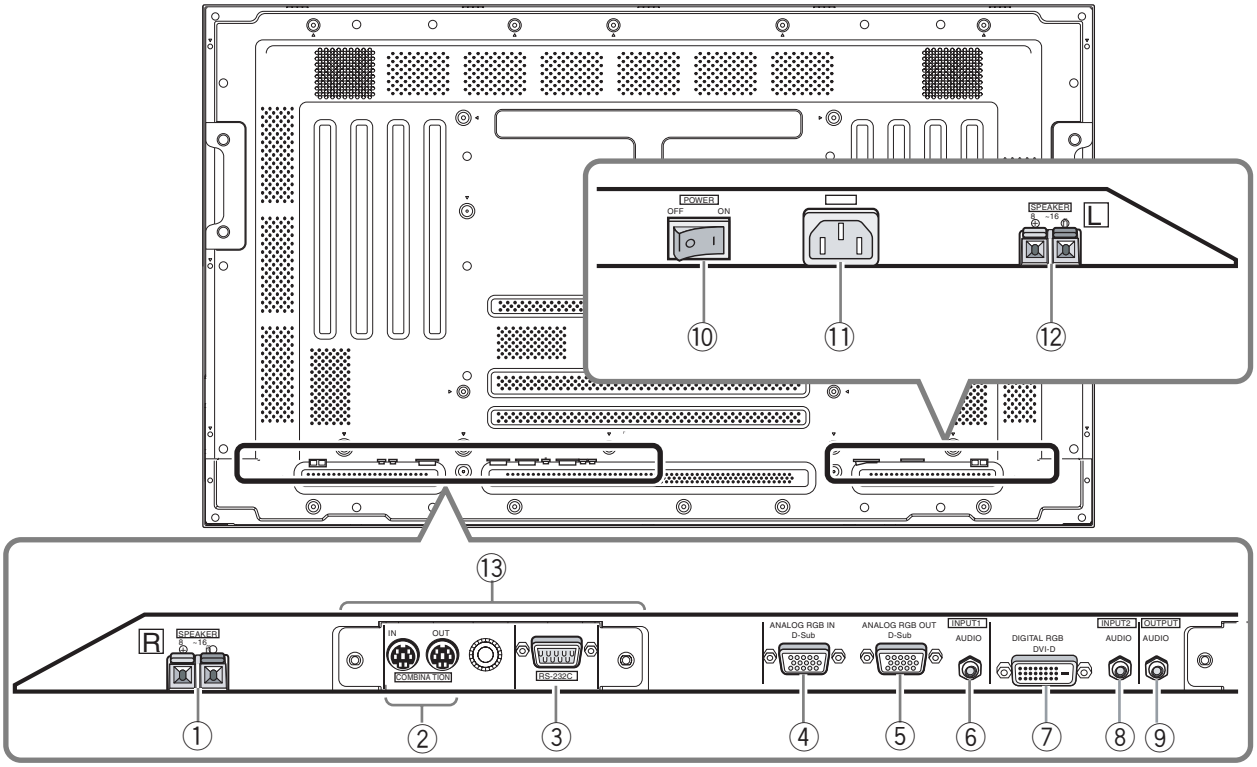
⑪ **VOLUME (+/–) buttons**
When not indicated for use in onscreen menu items,these buttons are used for adjusting the sound volume.

⑫ **SET/DISPLAY button**
Use to confirm onscreen menu selections, and to change settings.
When not indicated by onscreen menus, used to display the current set status.

⑬ **SCREEN SIZE button**
Press to select the screen size.

⑭ **AUTO SET UP button**
When using computer signal input, automatically sets the [POSITION], [CLOCK] and [PHASE] to optimum values.

■ CONNECTION PANEL (PLASMA DISPLAY SECTION)



Plasma Display Section

The plasma display is provided with 2 video input connectors, 1 video output connector, audio input/output jacks and speaker terminals.
When this video card is installed on a plasma display, an additional three sets of video input connectors are provided (total five), together with one additional video output connector (total two).

① **SPEAKER (R) terminal**
For connection of an external right speaker.
Connect a speaker that has an impedance of 8 -16 Ω.

② **COMBINATION IN/OUT**
Never connect any component to these connectors without first consulting your Pioneer installation technician.
These connectors are used in the factory setup.

③ **RS-232C**
Never connect any component to this connector without first consulting your Pioneer installation technician.
This connector is used in the factory setup.

④ **ANALOG RGB IN (INPUT1) (mini D-sub 15 pin)**
For connection of a personal computer (PC) or similar component. Make sure that the connection made corresponds to the format of the signal output from the connected component.

⑤ **ANALOG RGB OUT (INPUT1) (mini D-sub 15 pin)**
Use the ANALOG RGB OUT (INPUT1) terminal to output the video signal to an external monitor or other component.
Note: The video signal will not be output from the ANALOG RGB OUT (INPUT1) terminal when the main power of this unit is off or in standby mode.

⑥ **AUDIO (INPUT1) (Stereo mini jack)**
Use to obtain sound when INPUT1 is selected.
Connect the audio output jack of components connected to INPUT1 to this unit.

⑦ **DIGITAL RGB (INPUT2) (DVI-D jack)**
Use to connect a computer.
Note: This unit does not support the display of copyguard-protected video signals.

⑧ **AUDIO (INPUT2) (Stereo mini jack)**
Use to obtain sound when INPUT2 is selected.
Connect the audio output jack of components connected to INPUT2 to this unit.

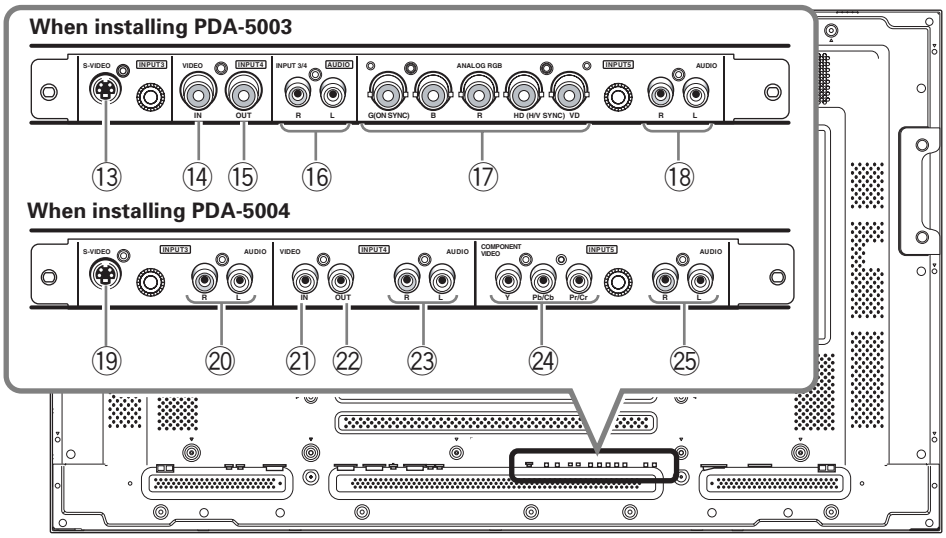
⑨ **AUDIO (OUTPUT) (Stereo mini jack)**
Use to output the audio of the selected source component connected to this unit to an AV amplifier or similar component.

⑩ **MAIN POWER switch**
Use to switch the main power of the unit on and off.

⑪ **AC IN**
Use to connect a power cord to an AC outlet.

⑫ **SPEAKER (L) terminal**
For connection of an external left speaker. Connect a speaker that has an impedance of 8 -16 Ω.

■ CONNECTION PANEL (VIDEO CARD SECTION: PDA5003, PDA-5004)



Video Card <PDA-5003> Section

The video card is provided with 3 video input connectors, 1 video output connector, and 2 audio input connectors. Consult the pages noted in parentheses ( ) for details regarding connections to the various jacks and connectors.

⑬ **S-VIDEO (INPUT3) (S-video jack)**
For connection of components that have an S-video output jack such as a video deck, video camera, laser disc player, or DVD recorder).

⑭ **VIDEO IN (INPUT4) (BNC jack)**
For connection of components that have a composite video output jack such as a video deck, video camera, laser disc player, or DVD recorder.

⑮ **VIDEO OUT (INPUT4) (BNC jack)**
Use the VIDEO OUT (INPUT4) jack to output the video signal to an external monitor or other component.
Note: The video signal will not be output from the VIDEO OUT (INPUT4) jack when the main power of this display is off or in standby mode.

⑯ **AUDIO R/L (INPUT3/4) (RCA Pin jacks)**
Use to obtain sound when INPUT3 or INPUT4 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT3 or INPUT4.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

⑰ **ANALOG RGB (INPUT5) (BNC jacks)**
For connecting components equipped with RGB outputs jacks, such as a personal computer or external RGB decoder; or components equipped with component output jacks, such as a DVD recorder.
Make sure that the connection made corresponds to the format of the signal output from the connected component.

⑱ **AUDIO R/L (INPUT5) (RCA Pin jacks)**
Use to obtain sound when INPUT5 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT5.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

Video Card <PDA-5004> Section

The video card is provided with 3 video input connectors, 1 video output connector, and 3 audio input connectors. Consult the pages noted in parentheses ( ) for details regarding connections to the various jacks and connectors.

⑲ **S-VIDEO (INPUT3) (S-video jack)**
For connection of components that have an S-video output jack such as a video deck, video camera, laser disc player, or DVD recorder.

⑳ **AUDIO R/L (INPUT3) (RCA Pin jacks)**
Use to obtain sound when INPUT3 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT3.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

㉑ **VIDEO IN (INPUT4) (RCA Pin jack)**
For connection of components that have a composite video output jack such as a video deck, video camera, laser disc player, or DVD recorder.

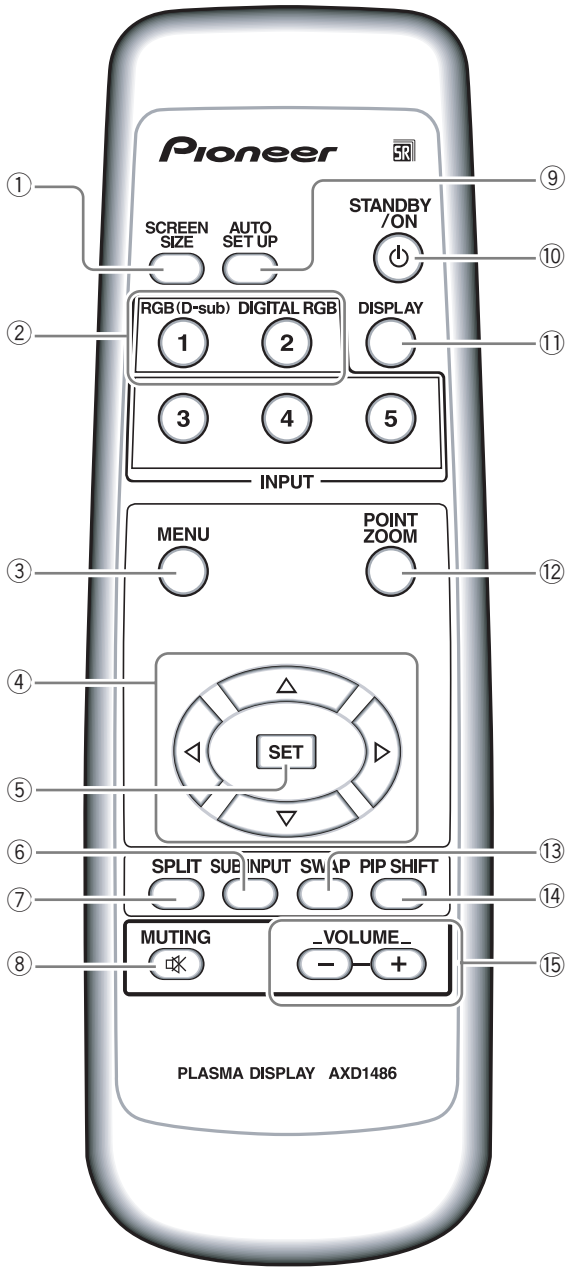
㉒ **VIDEO OUT (INPUT4) (RCA Pin jack)**
Use the VIDEO OUT (INPUT4) jack to output the video signal to an external monitor or other component.
Note: The video signal will not be output from the VIDEO OUT (INPUT4) jack when the main power of this display is off or in standby mode.

㉓ **AUDIO R/L (INPUT4) (RCA Pin jacks)**
Use to obtain sound when INPUT4 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT4.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

㉔ **COMPONENT VIDEO (INPUT5) (RCA Pin jacks)**
For connection of components that have component video output jacks such as a DVD recorder.

㉕ **AUDIO R/L (INPUT5) (RCA Pin jacks)**
Use to obtain sound when INPUT5 is selected. Connect these jacks to the audio output connectors of components connected to the video card's INPUT5.
Note: The left audio channel (L) jack is not compatible with monaural input sources.

■ REMOTE CONTROL UNIT



① **SCREEN SIZE button**
Press to select the screen size.

② **INPUT buttons**
Press to select the input .

③ **MENU button**
Press to open and close the on-screen menu.

④ **ADJUST (▲ / ▼ / ► / ◄) buttons**
Use to navigate menu screens and to adjust various settings on the unit.
Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.

⑤ **SET button**
Press to adjust or enter various settings on the unit.

⑥ **SUB INPUT button**
During multi-screen display, use this button to change inputs to subscreens.

⑦ **SPLIT button**
Press to switch to multi-screen display.

⑧ **MUTING button**
Press to mute the volume.

⑨ **AUTO SET UP button**
When using computer signal input, automatically sets the [POSITION], [CLOCK] and [PHASE] to optimum values.

⑩ **STANDBY/ON button**
Press to put the unit in operation or standby mode.

⑪ **DISPLAY button**
Press to view the unit's current input and setup mode.

⑫ **POINT ZOOM button**
Use to select and enlarge one part of the screen.
SWAP button During multi-screen display, use this button to switch between main screen and subscreen.

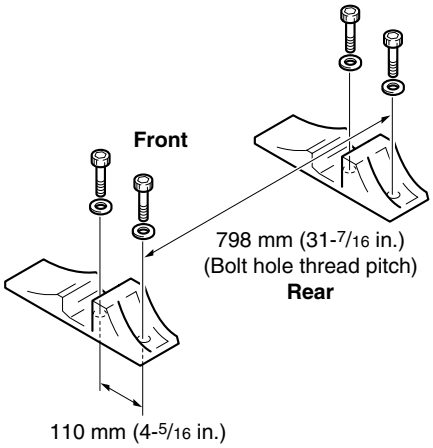
⑭ **PIP SHIFT button**
When using PinP mode with multi-screen display, use this button to move the position of subscreen.

⑮ **VOLUME (+/–) buttons**
Use to adjust the volume.

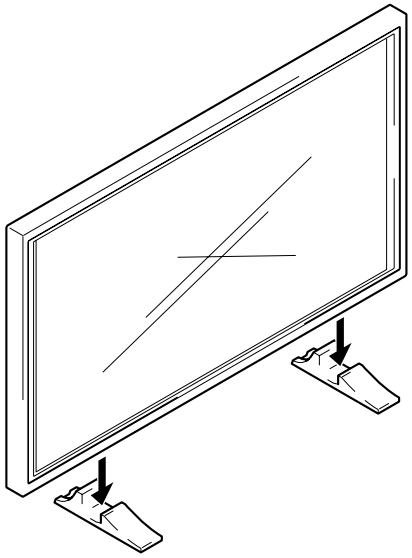
■ INSTALLATION OF THE UNIT

Installation using the supplied display stand
Be sure to fix the supplied stand to the installation surface. Use commercially available M8 bolts that are 25 mm longer than the thickness of the installation surface.

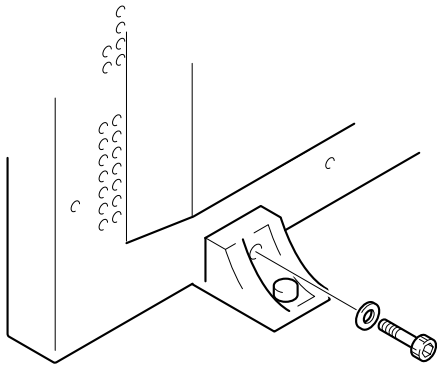
1. Fix the supplied stand to the installation surface at each of the 4 prepared holes using commercially available M8 bolts .



2. Set this unit in the stand.



3. Fix this unit using the supplied washer and bolt.



Use a 6 mm ($^1/_4$ in.) hex wrench to bolt them.

⚠ CAUTION
This display unit weighs at least 30 kg (67 lbs) and has little front-to-back depth, making it very unstable when stood on edge. As a result, two or more persons should cooperate when unpacking, moving, or installing the display.

Installation using the optional PIONEER stand or installation bracket

- Please be sure to request installation or mounting of this unit or the installation bracket by an installation specialist or the dealer where purchased.
- When installing, be sure to use the bolts provided with the stand or installation bracket.
- For details concerning installation, please refer to the instruction manual provided with the stand or installation bracket.

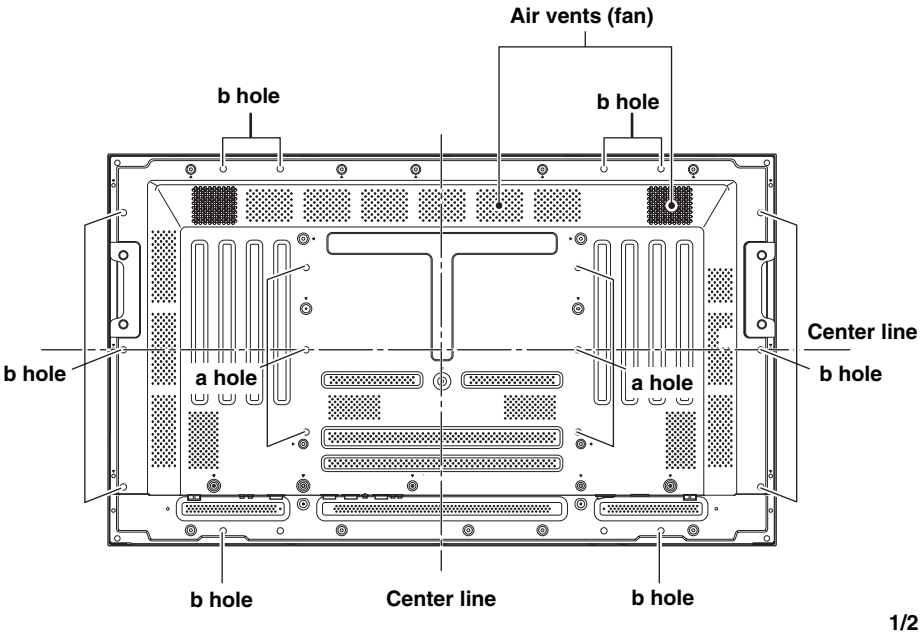
Installation using accessories other than the PIONEER stand or installation bracket (sold separately)

- When possible, please install using parts and accessories manufactured by PIONEER. PIONEER will not he held responsible for accident or damage caused by the use of parts and accessories manufactured by other companies.
- For custom installation, please consult the dealer where the unit was purchased, or a qualified installer.

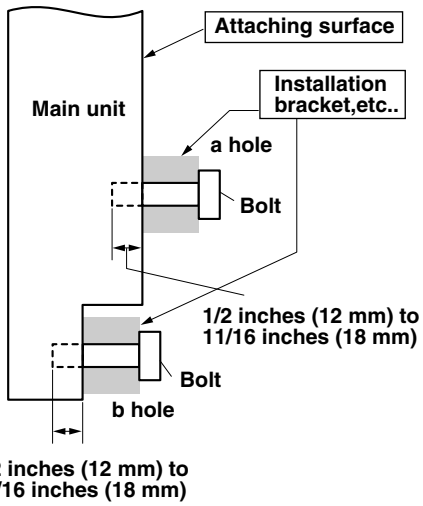
Wall-mount installation of the unit

This unit has been designed with bolt holes for wall-mount installation, etc.. The installation holes that can be used are shown in the diagram below.

- Be sure to attach in 4 or more locations above and below, left and right of the center line.
- Use bolts that are long enough to be inserted 1/2 inch (12 mm) to 11/16 inch (18 mm) into the main unit from the attaching surface for both a holes and b holes. Refer to the side view diagram below.
- As this unit is constructed with glass, be sure to install it on a flat, unwarped surface.



Rear view diagram



Side view diagram

CAUTION

To avoid malfunction, overheating of this unit, and possible fire hazard, make sure that the vents on the main unit are not blocked when installing. Also, as hot air is expelled from the air vents, be careful of deterioration and dirt build up on rear surface wall, etc..

CAUTION

Please be sure to use an M8 (Pitch = 1.25 mm) bolt. (Only this size bolt can be used.)

CAUTION

Because this unit weighs about 88 lbs 3 oz (about 40 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

CAUTION

This unit incorporates a thin design. To ensure safety if vibrated or shaken, please be sure to take measures to prevent the unit from tipping over.